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ABSTRACT

Title I projects operated in the Bureau of Indian Affairs (BIA), Phoenix Area, during Fiscal 1972 are described in this final evaluation report. An overview of the geographical location of Areas within the BIA is given, along with the organization of the BIA at large and of the Phoenix Area. Enrollments in the Phoenix Area projects are presented by day and boarding schools, elementary and high schools, grade level, and tribal agencies. Special attention is given to the background of Title I of the Elementary and Secondary Act of 1965 and to subsequent modifications. Additionally, background demographic information is discussed in relation to the Phoenix Area's Title I funding, student participation, staff positions, dissemination of information, accomplishments, and problem areas encountered during Fiscal 1972. Projects are classified and discussed by components in the cognitive, psychomotor, and affective domains, for example, reading, physical fitness, and drop-out reduction, respectively. Within each component, vital project statistics are followed by a discussion of the evaluation results. The summary, conclusion, and recommendations chapter is followed by a discussion of Fiscal 1973, which presents specific modifications designed to improve new projects in the Phoenix Area. A related document is ED 056 795. (FF)

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TITLE I

FINAL EVALUATION REPORT

RC006593

PHOENIX AREA
BUREAU OF INDIAN AFFAIRS
FY 1972

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REPORT OF FINAL EVALUATION

ESEA TITLE I PROJECTS

FISCAL YEAR 1972

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS, EDUCATION

PHOENIX AREA

John Artichoker, Jr.
Area Director

Ray Sorensen
Assistant Area Director (Education)

David N. Burch
Deputy Assistant Area Director
(Education)

Harriet B. Hilburn
Federal Programs Administrator

Steven J. Anderson
Title I Specialist

Richard L. Schwartz
Title I Specialist

David R. Moers
Title I Specialist

AUGUST 1972

P R E F A C E

This report addresses itself to the Title I projects operated in the Bureau of Indian Affairs, Phoenix Area, during Fiscal 1972.

For the reader who may not be cognizant of the organization of the Bureau, an overview of the geographical location of Areas within the Bureau of Indian Affairs will be given along with the organization of the Bureau at large and the Phoenix Area. Enrollment in the Phoenix Area is presented by day and boarding schools, elementary and high schools, grade level, and tribes.

Since the understanding of Title I is contingent upon the knowledge of the intent of the legislation, its guidelines and regulations, special attention will be given to the background of Title I of the Elementary and Secondary Act of 1965 and subsequent modifications. Additionally, background demographic information is discussed in relation to the Phoenix Area's Title I funding, student participation, staff positions, dissemination of information, accomplishments, and problem areas encountered during Fiscal 1972.

Projects are classified by components in the cognitive, psychomotor, and affective domains, e.g., reading, physical fitness, and drop-out reduction. Within each component vital project statistics are followed by a discussion of the evaluation results.

Because the success of any program is based upon the correction of the problem areas encountered, the summary, conclusion, and recommen-

dations chapter is followed by a discussion of Fiscal 1973, which presents specific modifications designed to improve new projects in the Phoenix Area.

It is the intent of the Phoenix Area, Bureau of Indian Affairs to present an objective evaluation of Fiscal 1972 Title I projects. This report will outline not only the successes but also will point to the problems and difficulties encountered. It is hoped that by objectively representing both sides of the spectrum the reader may share in our experiences both positive and negative by replicating the successes, attacking the problems, and avoiding the difficulties. The desired effect from the reading of this report is the upgrading of special compensatory educational services for educationally deprived children.

A C K N O W L E D G E M E N T S

Appreciation is expressed to Mrs. Genevieve Dane, U.S. Office of Education, for the support she has given to the Phoenix Area. A deep debt of gratitude is extended to Mr. Heinz Meyer, Alburquerque Title I Office, for his continuing assistance to Title I in the Phoenix Area. Special thanks is extended to the many Indian people, Title I coordinators, the various faculties, the school administrators, Indian parents, community members, parent advisory councils and the support personnel who have devoted their time to the creation and implementation of the Title I programs during Fiscal 1972.

Thanks is expressed to Frances Makal who designed the cover and last but not least to the secretaries who typed this report, Geraldine Williams, LuAnn Kelly and Josephine Cosay.

For further information please contact:

Phoenix Area Office (Education)
Attention: Harriet B. Hilburn
Federal Programs Administrator
P.O. Box 7007
Phoenix, Arizona 85011

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THE BUREAU OF INDIAN AFFAIRS
PHOENIX AREA

C H A P T E R I

Since 1775, the Federal Government has had jurisdiction over Indian affairs. The responsibility for Indian affairs was first given to the War Department in 1824, then to the Department of the Interior in 1849, where it has remained under civilian control.

Although the Federal Government has responsibility over Indian affairs, most Indian children attend public schools. While there are approximately 205,574 school age Indian children, only 185,587 actually attend school. Of the 185,587 Indian students enrolled in schools, 68 percent attend public schools, 25 percent are in Federal schools, and 5 percent attend mission or other types of schools. Approximately 55,000 attend one of the 250 schools operated by the Bureau of Indian Affairs.

As can be seen in Figure I*, the responsibility for management of programs within the Bureau of Indian Affairs lies with the Office of the Commissioner, located in Washington, D.C. This office advises Assistants to the Commissioner and the Director of Education Programs, as well as Area Directors within the Bureau.

The Areas within the Bureau are shown on a map of the United States in Figure II*. The ten Area Offices are located in seven states with four

*Deleted because of nonreproducibility

of the Area Offices - Phoenix, Aberdeen, Muskogee, and Navajo - having jurisdiction over more than one state. In each Area Office, the Area Director is responsible for all activities including education. The Assistant Area Director (Education) assists in the discharge of educational activities in the schools under the Area Office's jurisdiction.

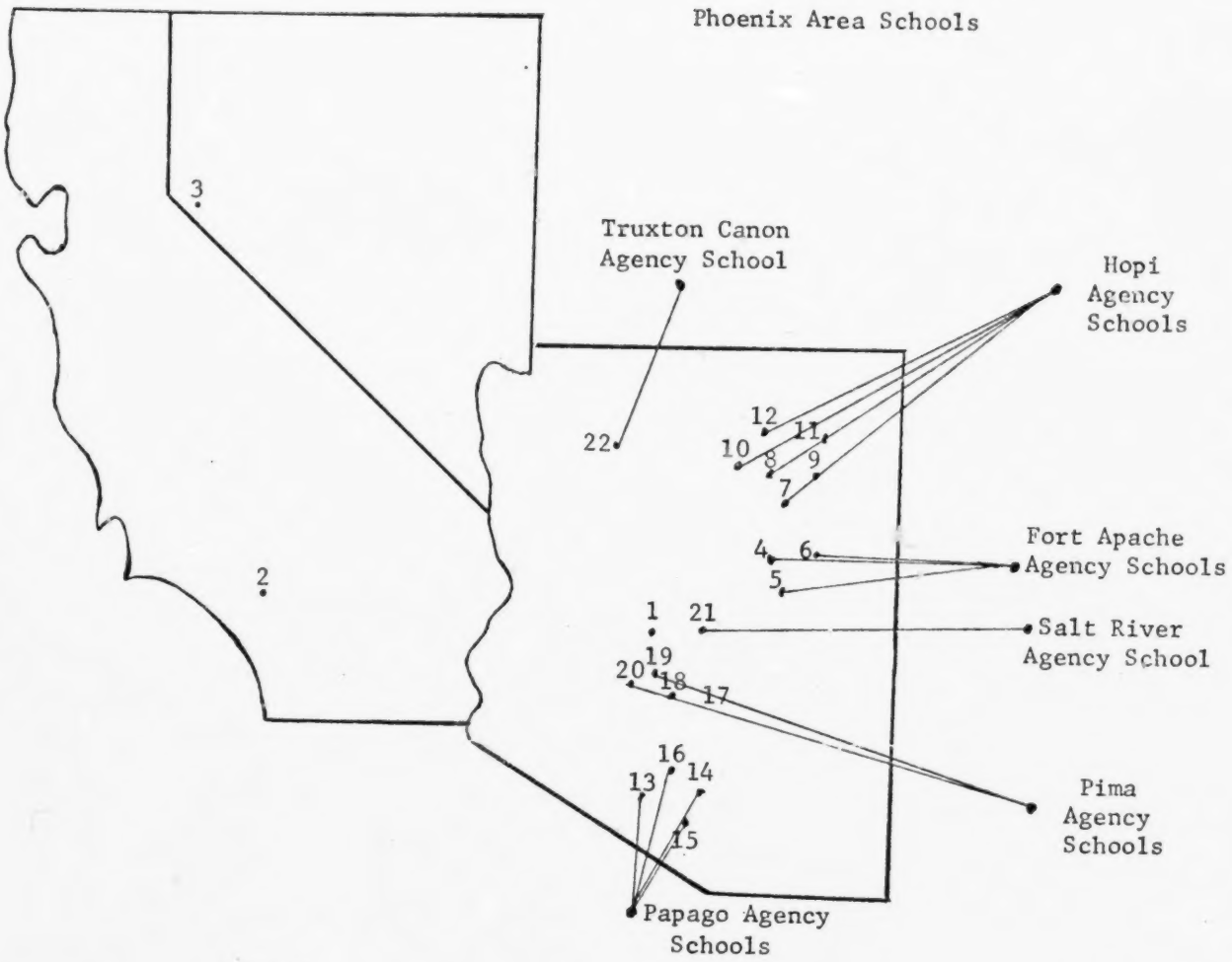
The Agency Offices represent the third organizational level within the Bureau. The agency superintendent, who reports to the Area Director, is responsible for both short and long range activities on the reservation (e.g., roads, education, industrial development, economic development, community services, and tribal relations). Figure III illustrates the organization of the Phoenix Area by agencies and schools. It may be observed that eleven separate agencies, two subagencies and two school units are served by the Phoenix Area.

Figure IV shows the jurisdiction of the Phoenix Area, and Figure V shows the agencies and schools located under each. As can be noted in Figure V, showing the geographical location of schools in the Phoenix Area, the 21 schools are situated in a three-state region comprised of Arizona, California, and Nevada. With the exception of two off-reservation high schools, all are located in Arizona. The two exceptions are Sherman Indian High School in Riverside, California and Stewart Indian High School in Stewart, Nevada. Phoenix Indian High School, the Area's third boarding high school, is located in the heart of Phoenix, Arizona.

Located in the White Mountains of eastern Arizona are the John F. Kennedy Day School, Cibecue Day School, and Theodore Roosevelt Boarding School. To the north, approximately 180 miles, are the Hopi mesas and

Figure III

Phoenix Area Schools



Legend

1. Phoenix Indian High School
2. Sherman Indian High School
3. Stewart Indian High School
4. Cibecue Day School
5. John F. Kennedy Day School
6. Theodore Roosevelt Boarding School
7. Hopi Day School
8. Hotevilla Day School
9. Keams Canyon Boarding School
10. Moencopi Day School
11. Polacca Day School
12. Second Mesa Day School
13. Kerwo Day School
14. Santa Rosa Boarding School
15. Santa Rosa Ranch Day School
16. Vaya Chin Day School
17. Blackwater Demonstration School
18. Casa Blanca Day School
19. Gila Crossing Day School
20. St. John's Mission School
21. Salt River Day School
22. Supai Day School

the six schools which serve the Hopi children. A mule trip is necessary to reach the Havasupai village, where the Supai Day School is located near the Grand Canyon. Farther south near the Mexico-Arizona border in the Senoran Desert, is the Santa Rosa Boarding School and three small day schools on the Papago Reservation. Approximately 30 miles south of Phoenix on the Gila River Reservation are the three Pima Bureau day schools, one small tribal operated school and one mission school. Also, located near metropolitan Phoenix is the Salt River Reservation which contains one day school.

Table 1 lists the number of students in each school and indicates that 2,911 attend boarding schools whereas 2,114 attend reservation day schools. Of the six boarding schools, three are off-reservation high schools located in Arizona (Phoenix Indian High School), Nevada (Stewart Indian High School), and California (Sherman Indian High School). The remaining three are elementary boarding schools and are located on the reservations of the White Mountain Apache, Papago, and Hopi Tribes.

Figure IV - Organization-Phoenix Area

Table 1

Enrollment in the Phoenix Area Schools by Agency and School for School Year 1971-72

Agency & School	Grades Served	Type of School by No. of Students Enrolled		Total
		Day School	Boarding School	
Elementary Schools				
Fort Apache Agency		400	236	636
Cibecue Day School	K-8	299		299
Theodore Roosevelt Brdg	K-5		236	236
John F. Kennedy Day	2-8	101		101
Hopi Agency		864	254	1,118
Hopi Day School	1-8	180		180
Hotevilla Day School	1-6	100		100
Keams Canyon Brdg/Day	B-8	51	254	305
Moencopi Day School	1-4	62		62
Polacca Day School	K-6	199		199
Second Mesa Day School	K-6	272		272
Papago Agency		357	172	529
Kerwo Day School	B-8	53		53
Santa Rosa Boarding/Day	B-8	199	172	371
Santa Rosa Ranch Day	B-7	23		23
Vaya Chin Day School	B-4	82		82
Pima Agency		231	300	531
Blackwater Demonstration*	K-1	27		27
Casa Blanca Day School	K-4	103		103
Gila Crossing Day School	K-5	76		76
St. Johns Indian School**	1-12	25	300	325
Salt River Agency		219		219
Salt River Day School	K-6	219		219
Truxton Canon Agency		43		43
Supai Day School	B-4	43		43
High Schools***				
Phoenix Indian High School	7-12		849	849
Sherman Indian High School	9-12		639	639
Stewart Indian High School	8-12		461	461
TOTALS		2,114	2,911	5,025

* = Contracted to Community
** = Catholic Mission School
*** = Off-Reservation Schools

BACKGROUND OF TITLE I OF THE ELEMENTARY
AND SECONDARY EDUCATION ACT OF 1965

C H A P T E R I I

The Elementary and Secondary Education Act (Public Law 89-10, 89th Congress, HR 2362), felt by some authorities to be the most far reaching and significant education legistlation ever written was passed by the United States Congress on April 11, 1965. The Act was designed to contribute toward meeting one or more of the special educational needs of educationally deprived children in the nation's elementary and secondary schools.

Quoted from the Act itself:

> " 'Educationally deprived children' means those children who have need for special educational assistance in order that their level of educational attainment may be raised to that appropriate for children of their age. The term includes children who are handicapped or whose need for such special educational assistance result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large ..."

Not until November, 1966, was the Bureau of Indian Affairs authorized by Congress to participate in Title I. At that time the Office of Education and the Bureau of Indian Affairs established criteria for the appraisal of BIA grant applications. In accordance with the Title I regulations, the following criteria were specifically established for the Bureau of Indian Affairs:

1. The Title I program will be conducted in schools operated by the Bureau of Indian Affairs in a manner which will provide relatively higher concentrations of services in the areas having high incidence of needs and the least ability and resources to overcome those needs.

2. The applications will specify the most important unmet needs of children which have been determined on the basis of a comprehensive assessment of all children enrolled or eligible for enrollment in Bureau of Indian Affairs schools.

3. The application will demonstrate that its development embodies a comprehensive planning endeavor involving full consideration of the functions and capabilities of Federal, State, and local agencies.

The remainder of the most important regulations applying to all agencies participating in ESEA Title I are summarized below:

4. The priority needs of educationally deprived children were determined in consultation with parents, teachers, private school authorities, students, and all others who have a continuing and genuine interest in the children. The objective of the consultation in establishing the priority needs of educationally deprived children is to develop a carefully documented list of needs for: (1) pre-school children, (2) early elementary children, (3) later elementary and secondary school children, (4) drop-outs, (5) institutionalized children, (6) handicapped children, and (7) non-English speaking children.

5. The Title I program must be designed to extend and reinforce the regular school program. Consideration must be given to the relationship of the Title I program to the regular school program and to the possibility of modifying that program so as to provide a better base for the addition of supplementary compensatory educational services.

6. The Title I program must be concentrated on those children who are most in need of receiving special educational services. The consideration of the relative needs of children at all ages and grade levels is designed to meet a limited number of high priority needs which cannot be met through the regular school program or other programs.

7. The Title I program is based on clearly stated performance objectives and desired outcomes and must show substantial promise in meeting the needs of educationally deprived children.

8. The Title I program must propose projects of sufficient size, scope and quality so as to give reasonable promise of substantial progress toward meeting the needs of educationally deprived children for whom the projects are intended.

9. The ratio of project staff to the number of children to be served must be high enough to provide individualized concentrated services to the educationally deprived students.

10. In-service training must be geared specifically to the requirements of the Title I staff and should be of sufficient size and depth to have an impact on the participants and the Title I program.

11. Educational aides assisting professional staff members must participate together in a coordinated training program closely allied to the tasks they will be performing.

12. The Title I program must provide for the maximum involvement of parents in the initial planning, development, implementation, and evaluation of Title I programs and these parents must be represented on all Title I advisory committees.

13. The Title I program must include adequate plans for the dissemination of information of all project activities to persons who have a continuing and genuine interest in the educationally deprived children.

14. The Title I program must contain a description of the evaluation techniques that are to be used in measuring the student performance objectives.

15. Title I funds must not be used to supplant regular program funds. Title I funds are to be planned and budgeted to assure that they are supplemental to regular program funds.

Title I of the Elementary and Secondary Education Act, the largest Federal aid-to-educational program was passed in 1965 to provice financial assistance to schools in planning and operating special programs for educationally deprived children. It is a supplementary program, designed to upgrade the educational opportunities of children from disadvantaged backgrounds, and not a general aide program. For more detailed information about Title I activities in specific locales, interested persons should contact their respective education agencies.

Overview of Title I In the Phoenix Area in Fiscal Year 1972

C H A P T E R I I I

Introduction

This chapter will present an overview of the Title I operation in the Phoenix Area during FY 1972. This overview will present the expenditure of funds by location and component as well as illustrate the number of students participating and the staff involved.

It should facilitate the readers understanding of Table 1 and further discussions contained within this report to be aware of the terms component, cognitive, affective, and psychmotor as they are referred to here. It should be noted that the following definitions are for the purpose of this report only. The writers fully realize the limitations and the generalities associated with these terms, and it is expected that the following definitions would not accurately or adequately denote the literal meaning of these terms used outside the context of this report.

Component - An activity or set of activities designed to meet a specific behavioral objective.

Cognitive - The realm of behavior which relates to the acquisition of knowledge, skills, insights, patterns of orientation, or the application of rationality to problem situations.

Table 2

Phoenix Area FY 1972 Title I Amounts Expended by Domain of Component by Agency or School

School/Agency	Phoenix Area FY 1972 Title I Amounts Funded by Components								Totals
	Cognitive				Affective	Psycho-Motor	Other		
	Special Education	Math	Science	Reading	Guidance/ Counseling	Physical Fitness	Administration/ Coord'tn	Contri. to Follow Through	
Elementary Schools									
Cibecue Day				70,238					70,238
Theodore Roosevelt Boarding				39,949	27,450		3,999		71,398
John F. Kennedy Day				23,446					23,446
Hopi Agency								46,839	46,839
Hopi Day				33,447		8,296			41,743
Hotevilla Day				29,788					29,788
Keams Canyon Brdg				71,529		28,627	5,433		105,589
Moencopi Day				18,737					18,737
Polacca Day				39,950	6,515	3,472			49,937
Second Mesa Day				62,012		5,555			67,567
Papago Agency				129,659					129,659
Pima Agency				82,793			8,131		90,924
Salt River Day				49,443	8,862	21,907	5,495		85,707
Supai Day				23,509					23,509
High Schools									
Phoenix Indian	10,324		32,655		149,548		5,225		197,752
Sherman Indian				30,607	56,519	22,548	7,000		116,674
Stewart Indian		19,038		45,613	66,606		6,772		138,029
Phoenix Area Office							99,673		
Component Totals	10,324	19,038	32,655	750,720	315,500	90,405	141,728	46,839	1,407,209
Domain Totals	$812,737				$315,500	$90,405	$188,567		$1,407,209

Affective - The realm of behavior which relates to feelings, emotions, attitudes, values, personality, and their collective impact upon an individual's personal, social, and academic development.

Psychomotor - This domain refers to the general area of neuromuscular development. This would include health, hygiene, and physical education or fitness.

Table 2 shows a total of $1,407,209 was expended during FY 1972. The cognitive domain components received the most money, $812,737, followed by the affective domain, $315,500. Reading components comprised the largest expenditures within the cognitive domain.

Table 3 represents the number of students participating by school or agency and component domain. Because of student participation in more than one component, any horizontal totals would represent meaningless duplicated counts and have thus been omitted. The largest number of students, 1,898, participated in the cognitive domain components, followed by affective domain, 1,049 students and psychomotor domain, 670 students. Reading components served by far the most students within the cognitive domain.

Table 3

Number of Students Participating in Title I Projects in Fiscal Year 1972 by Component by Agency or School

Agency/School	Number of Students Participating by Component*					
	COGNITIVE				Affective	Psychomotor
	Special Education	Math	Science	Reading	Guidance/ Counseling	Physical Fitness
Elementary Schools						
Cibecue Day School				80		
Theodore Roosevelt Brdg				120	133	
John F. Kennedy Day				33		
Hopi Day School				79		61
Hotevilla Day School				28		
Keams Canyon Boarding School				197		159
Moencopi Day School				20		
Polacca Day School				83	30	164
Second Mesa Day School				51		89
Papago Agency Schools				313		
Pima Agency Schools				227		
Salt River Day School				66	66	107
Supai Day School				46		
High Schools						
Phoenix Indian High	60		60		440	
Sherman Indian High				250	270	90
Stewart Indian High		60		125	110	
Component Totals	60	60	60	1,718	1,049	670
Domain Totals		1,898			1,049	670

* No horizontal totals are given in that there are duplicated student counts.

Tables 4 and 5 show the number of staff positions utilized in FY 1972 components. As can be seen in Table 4, 130 positions were funded by Title I funds. Title I funds provided for 92 paraprofessionals and 38 professionals, and regular program funds provided for 10 paraprofessionals and 42 professionals, as can be seen in Table 5. The Title I funded positions were concentrated in the congnitive domain whereas Table 5 shows that regular program funds were more equally divided among components.

Table 4

Number of Professional and Paraprofessional Staff Positions Funded by Title I In FY 72
by Type of Component by Agency or School

School/Agency	Components by Number of Staff Positions																Totals		
	COGNITIVE								Afctive		Psymtr		Other						
	Spec. Educ.		Math		Science		Reading		Guidnce Cnslng		Phys. Educ.		Admin/ Coord'n		Follow Thru				
	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools																			
Cibecue Day School							1	5									1	5	6
Theodore Roosevelt Boarding								5		1				1				7	7
John F. Kennedy Day School								3										3	3
Hopi Day School								3										3	3
Hopi Follow-Through																9		9	9
Hotevilla Day School							1	1									1	1	2
Keams Canyon Boarding/Day							1	4			1	2	1				3	6	9
Moencopi Day School								1										1	1
Polacca Day School								2		1		1						4	4
Second Mesa Day School							3	2				1					3	3	6
Papago Agency Schools							2	12									2	12	14
Pima Agency Schools							4	4						1			4	5	9
Salt River Day School							1	4	1		1	2		1			3	7	10
Supai Day School							1	1									1	1	2
High Schools																			
Phoenix Indian High School	1				1	1			7	6				1			9	8	17
Sherman Indian High School										4		1		1				6	6
Stewart Indian High School			1	1			3	1	4	5				1			8	8	16
Phoenix Area Office													3	3			3	3	6
COMPONENT TOTALS	1	0	1	1	1	1	17	48	12	17	2	7	4	9	0	9	38	92	130
DOMAIN TOTALS	70								29		9		22				130		

P = Professional
Pp = Paraprofessional

Table 5

Number of Regular Program Employees Working in FY 72 Title I Components
by Agency or School

Agency/School	Components by Number of Staff Positions																
	COGNITIVE								Affective		Psychomtr		Other		Total		
	Special Education		Math		Science		Reading		Guidance-Counseling		Physical Fitness		Adminis./ Coord'n				
	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools																	
Cibecue Day School																	
Theodore Roosevelt Brdg							1		1				1		3		3
John F. Kennedy Day																	
Hopi Follow-Through																	
Hopi Day School							2				2	1			4	1	5
Hotevilla Day School																	
Keams Canyon Brdg											1				1		1
Moencopi Day School																	
Polacca Day School							1								1		1
Second Mesa Day School																	
Papago Agency Schools							9								9		9
Pima Agency Schools							1								1		1
Salt River Day School																	
Supai Day School																	
High Schools																	
Phoenix Indian High										6						6	6
Sherman Indian High							3	2	10	1	2	1			16	3	19
Stewart Indian High									7						7		7
Phoenix Area Office																	
COMPONENT TOTALS							17	2	18	7	5	1	2		42	10	52
DOMAIN TOTALS	19								25		6		2		52		

P = Professional

Pp = Paraprofessional

COGNITIVE DOMAIN COMPONENTS

C H A P T E R I V

As defined in Chapter III, the cognitive domain refers to that aspect of learning which relates to the acquisition of knowledge, skills, insights, patterns of orientation, or the application of rationality to problem-situations. The data and discussions contained within this chapter and the subsequent sub-chapters deal with all components which had objectives of a cognitive nature. These have been categorized as (1) reading, (2) math, (3) science, and (4) special education.

Table 6 shows that a total of $812,737 was expended for components in the cognitive domain. By far the largest concentration of funds ($750,720) were in reading components followed by science ($32,655) and special education ($10,324) components. In reading there were 17 professional and 48 paraprofessional staff serving 1,718 pupils. Special education had one professional serving 60 pupils, and math and science each had one professional and one paraprofessional serving 60 pupils.

Table 6

Numbers of Students Participating in FY 1972 Title I Cognitive Domain Components by Agency or School

Agency/School	Cognitive Domain Components						Totals
	Special Education	Math	Science	Reading			
				Type I	Type II	Type III	
Elementary Schools							
Cibecue Day School					80		80
Theodore Roosevelt Brdg				120			120
John F. Kennedy Day					33		33
Hopi Day School					79		79
Hotevilla Day School				28			28
Keams Canyon Brdg/Day				197			197
Moencopi Day School					20		20
Polacca Day School					83		83
Second Mesa Day School					51		51
Papago Agency Schools				313			313
Pima Agency Schools						227	227
Salt River Day School					66		66
Supai Day School				46			46
High Schools							
Phoenix Indian High	60		60				120
Sherman Indian High					250		250
Stewart Indian High		60			125		185
TOTALS	60	60	60	704	787	227	1,898
COMPONENT TOTALS	60	60	60	1,718			1,898

Table 7

Amounts Funded in FY 1972 Title I Cognitive Domain Components by Agency or School

Agency/School	Cognitive Domain Components						Totals
	Special Education	Math	Science	Reading			
				Type I	Type II	Type III	
Elementary Schools							
Cibecue Day School					70,238		70,238
Theodore Roosevelt Brdg				39,949			39,949
John F. Kennedy Day School					23,446		23,446
Hopi Day School					23,447		23,447
Hotevilla Day School				29,788			29,788
Keams Canyon Boarding/Day				71,529			71,529
Moencopi Day School					18,737		18,737
Polacca Day School					39,950		39,950
Second Mesa Day School					62,012		62,012
Papago Agency Schools				129,659			129,659
Pima Agency Schools						82,793	82,793
Salt River Day School					49,443		49,443
Supai Day School				23,509			23,509
High Schools							
Phoenix Indian High School	10,324		32,655				42,979
Sherman Indian High School				30,607			30,607
Stewart Indian High School		19,038			45,613		64,651
TOTALS	10,324	19,038	32,655	325,041	342,886	82,793	812,737
COMPONENT TOTALS	10,324	19,038	32,655	750,720			812,737

Table 8

Number of Professional and Paraprofessional Staff Positions Funded by FY 1972 Title I
Cognitive Domain Component by Agency or School

Agency/School	Cognitive Domain Components												Totals		
	Special Education		Math		Science		Reading Type I		Reading Type II		Reading Type III				
	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools															
Cibecue Day School									1	5			1	5	6
Theodore Roosevelt										5				5	5
John F. Kennedy Day										3				3	3
Hopi Day School										3				3	3
Hotevilla Day School							1	1					1	1	2
Keams Canyon Brdg/Day							1	4					1	4	5
Moencopi Day School										1				1	1
Polacca Day School										2				2	2
Second Mesa Day School									3	2			3	2	5
Papago Agency Schools							2	12					2	12	14
Pima Agency Schools											4	4	4	4	8
Salt River Day School									1	4			1	4	5
Supai Day School							1	1					1	1	2
High Schools															
Phoenix Indian High	1				1	1							2	1	3
Sherman Indian High			1	1					3	1			4	2	6
Stewart Indian High															
TOTALS	1	0	1	1	1	1	5	18	8	26	4	4	20	50	70
COMPONENT TOTALS	1		2		2		65						70		

P = Professional Pp = Paraprofessional

Table 9

Number of Regular Program Employees Working in FY 1972 Title I Cognitive Domain Components by Agency or School

Agency/School	Cognitive Domain Components												Totals		
	Special Education		Math		Science		Reading Type I		Reading Type II		Reading Type III				
	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools															
Cibecue Day School															
Theodore Roosevelt							1						1		1
John F. Kennedy Day															
Hopi Day School									2				2		2
Hotevilla Day School															
Keams Canyon Brdg/Day															
Moencopi Day School															
Polacca Day School									1				1		1
Second Mesa Day School															
Papago Agency Schools							9						9		9
Pima Agency Schools											1		1		1
Salt River Day School															
Supai Day School															
High Schools															
Phoenix Indian High															
Sherman Indian High									3	2			3	2	5
Stewart Indian High															
TOTALS	0	0	0	0	0	0	10	0	6	2	1	0	17	2	19
COMPONENT TOTALS	0		0		0		19						19		

P = Professional Pp = Paraprofessional

READING COMPONENTS

C H A P T E R I V - A

Tables 6,7,8, and 9 present data pertaining to funding, number of pupils served, and staffing patterns for the various reading components.

As can be seen, the reading components have been divided into three types for the purpose of comparing the effects of different instructional designs. Type I reading components utilized one or more of the Educational Development Laboratories Systems approaches. These systems are designed in a structural sequential approach to total communications instruction. They present material in a variety of modes, and are dependent upon various special purpose audio-visual instruments to present the materials on an individualized basis. Type II components utilized segments of several commercial systems including supplementary equipment and materials. Even though this type used many and varied approaches, the instructional design and sequence was dependent upon each teacher. Type III components were largely language experience programs, and were not dependent upon audio-visual devices not normally found in the classroom.

As can be seen from the tables, Type II projects received $342,886 of the $750,720 allocated for reading components, Type I projects received $325,041 and Type III projects were a distant third in funding

with $82,793. There were five professional and 18 paraprofessional staff serving 704 pupils in Type I projects; 8 professional and 26 paraprofessionals serving 787 pupils in Type II projects, and 4 professionals and 4 paraprofessionals serving 227 pupils in Type III projects.

The components will be individually discussed by school.

C I B E C U E D A Y S C H O O L

Operation Speakeasy

I. Vital Statistics

A. School Name and Address:	Cibecue Day School Fort Apache Agency Whiteriver, Arizona 85941
B. Component Cost:	$70,238.00
C. Staffing Pattern:	Professional - One Reading Teacher (Title I) Paraprofessional - Five Bilingual Aides (Title I)
D. Number of Student Participants:	80
E. Contact Person:	Glenn Marshall, Principal
F. Operational Period:	September to January
G. Years in Operation:	One

II. Component Objectives

To raise eighty (80) students' mean reading and language scores in grades one through eight to grade level as measured by the California Achievement Test.

III. Evaluation

Pre-Mid-Post California Achievement Test: Reading & Language

IV. Procedures

Activity I

This activity involved reading instruction in a laboratory setting divorced from the regular classroom and incorporating several systems utilizing special equipment. The average teacher to student ratio was 1 to 10 and the average aide to student ratio

was 1 to 5. The students were involved in the activity five days per week, 45 minutes per day.

Activity II

Four aides were utilized to provide continuity of instruction from the lab to the regular classroom. These aides accompanied target group students to the reading laboratory.

Activity III

This activity consisted of twelve field trips designed to increase the students' range of experiences.

Activity IV - Art Van

The Art Van staff provided services four days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 10

California Achievement Test - Total Reading Section
Cibecue Day School

Test Periods	GRADE LEVEL															
	1		2		3		4		5		6		7		8	
	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M
Pre-Test (September 1971)	10	.42	13	.50	10	.56	9	1.26	11	1.60	8	2.30	6	2.50	7	2.40
Post-Test (April 1972)	12	.60	14	.50	10	1.10	7	1.90	9	3.30	8	2.50	6	3.90	6	3.60
Amount of Gain or Loss (+-)	—	+.18	—	N/C	—	+.54	—	+.64	—	+1.70	—	+ .20	—	+1.4	—	+1.20

N* = Number of Students Tested

M = Mean in grade equivalent score

Table 11

California Achievement Test - Total
Language Section, Cibecue Day
School

Test Periods	GRADE LEVEL															
	1		2		3		4		5		6		7		8	
	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M	N*	M
Pre-Test (September 1971)	10	.48	13	.14	10	1.10	9	1.40	11	1.80	8	1.90	6	2.50	7	3.00
Post-Test (April 1972)	12	.35	14	.56	10	.74	7	1.40	9	2.10	8	2.40	6	3.60	6	4.00
Amount of Loss or Gain (- +)	—	-.13	—	+.42	—	-.36	—	N/C	—	+.30	—	+.50	—	+1.10	—	+1.00

N* = Number of Students Tested

M = Mean in grade equivalent score

V. Discussion

The pre-post California Achievement Test - Total Reading Scores for grades 1 to 8 at Cibecue Day School are summarized in Table 10. An examination of the pre-test scores shows that pupils in some grade levels were reading as much as 5.5 years below grade level. In addition, the mean pre-test scores for grades 1, 2, and 3 were all below .6 which may mean that many pupils did not understand the directions of the test. These facts plus the fact that the special reading teacher resigned in January without properly training an aide to take over, and because the project began late, the reported results are probably not a true evaluation of the project as originally designed. Even with all these factors working against the success of the program, pupils in several grades showed tremendous progress. For example, in grade 5 pupils increased their reading scores by 1.7 years and in grade 7 pupils increased their reading scores by 1.4 years.

The results of the California Achievement Test - Total Language sub-test are reported in Table 11. The above listed problems appeared to have a more detrimental effect on the lower grade pupils language scores than on the reading scores. For example in grade 1 there was a decrease of .36 years, and in grade 4 there was no change from pre-post test. Seventh and eighth grade pupils gained 1.1 and 1.0 years respectively on the language test and they therefore did not seem to be as affected by the problems as the younger pupils were.

J O H N F. K E N N E D Y D A Y S C H O O L

Communication Learning Center

I. Vital Statistics

A. Name and Address:	John F. Kennedy Day School Fort Apache Agency Whiteriver, Arizona 85941
B. Component Cost:	$23,446.00
C. Staffing Pattern:	Professional 1 Reading Teacher (1740) Paraprofessional 1 Teacher Aide (Title I)
D. Number of Student Participants:	33
E. Contact Person:	Perry Moss, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

To raise the reading scores of 33 target students, grades K-6, to national norms as measured by the California Achievement Test, Total Reading.

To raise the total language scores of 33 target students, grades K - 6, to national norms as measured by the California Achievement Test, Total Language.

III. Evaluation

Pre-Mid-Post, California Achievement Test, reading and language.

IV. Procedures

Activity I

This activity consisted of a laboratory separate from the regular

classroom and incorporated several systems utilizing special equipment. The average teacher to student and aide to student ratio was 1 to 6. The students participated on an average of 2½ periods a week, 40 minutes per period.

Table 12

California Achievement Test
Total Reading 1970 Norms
John F. Kennedy Day School

Test Periods	GRADE LEVEL									
	1		2		3		4		5	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 1971)	6	.60	5	1.02	6	1.15	9	2.08	1	1.90
Post-Test (May 1972)	6	.97	5	1.92	6	2.20	9	2.88	1	3.30
Amount of Gain or Loss (+ or -)	—	+.37	—	+.90	—	+1.05	—	+.80	—	+1.40

N* - Number of Students Tested

Mean = Mean grade equivalent score

Table 13

California Achievement Test
Total Language
John F. Kennedy Day School

Test Periods	GRADE LEVEL									
	1		2		3		4		5	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 1971)	12	.3	5	1.08	6	1.07	9	2.15	1	3.5
Post-test (May 1972)	12	.9	5	2.36	6	2.15	9	3.39	1	1.8
Amount of Gain or Loss (+ or -)	—	+.6	—	+1.28	—	+1.08	—	+1.24	—	-1.7

N* - Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test - Total Reading scores for John F. Kennedy Day School are reported in Table 12. The results summarized in Table 12 show there were relatively small gains (.37 years) in the first grade. Even this result may be spurious as the pre-test scores all fell at .60 which is the lowest possible score on the California Achievement Test. One possibility for such poor pre-test results is that the test may not be a true indicator of their abilities. If this is true, then the pupils actual scores would have been some unknown amount closer to their performance at the end of the year and the gain scores would be even less than reported. The gains for grade 4 were moderate (.80 years) whereas the gains for grades 2, 3, and 5 were marked improvements ranging from .90 to 1.40 years.

The results of the California Achievement Test - Language Sub-test are reported in Table 13. These results show spectacular gains in language performance of 1.26, 1.08, and 1.24 years respectively in grades 2, 3, and 4. First grade pupils increased their scores .6 years. In grade 5 there was a decrease of 1.7 years in language development for the one pupil tested. This same pupil had a gain of 1.40 years in his reported reading scores, thus both scores are suspected of being invalid.

THEODORE ROOSEVELT BOARDING SCHOOL

Communication Skills

I. Vital Statistics

A. School Name and Address:	Theodore Roosevelt Brdg Schl P.O. Box 567 Fort Apache, Arizona 85926
B. Component Cost:	$39,949.00
C. Staffing Pattern:	Professional - One Reading Specialist (1740) Paraprofessional - Five Teacher Aides (Title I)
D. Number of Student Participants:	120
E. Contact Person:	Glenn Sorensen, Principal
F. Operational Period:	September to May
G. Years in Operation:	Two

II. Component Objectives

One hundred twenty (120) students, grades 3-8, will raise their reading and language achievement scores 1.5 years as measured by the California Achievement Test.

III. Evaluation

Pre-Mid-Post California Achievement Test

IV. Procedures

Activity I

Four aides were used in regular classroom activities to extend the reading experiences offered in the reading laboratory.

Activity II

This activity consisted of a reading laboratory located separate from the regular classroom and utilizing EDL's LISTEN LOOK LEARN and Learning 100 Systems. Teacher to student ratio was 1 to 20. Aide to student ratio was 1 to 10. The students participated in this activity five days per week, 45 minutes per day.

Activity III

This activity provided special program experiences conducted by competent professionals for target group students in the following: listening, writing, speech, creative communication design and reading for pleasure.

Activity IV

Two field trips comprised this activity. These trips were designed to provide students with a background of experiences related to growth in English language skills.

Activity V - Art Van

The Art Van staff provided services sixteen days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting from 45 minutes to an hour and a half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were designed to provide vocabulary and concept building activities which related to the reading program.

The staff worked with dorm students and personnel on a variety of tasks such as: cloth banners, clay activities, etc. As well as decorations and designs appropriate for dormitory rooms.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 14

California Achievement Test - Total
Reading, 1963 Norms, Theodore
Roosevelt Boarding School

Test Periods	GRADE LEVEL											
	3		4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/1971)	2	2.95	5	2.38	7	3.04	9	3.78	21	4.08	27	4.97
Post-Test (5/1972)	2	3.20	5	3.06	7	4.00	9	4.76	21	5.05	27	5.66
Amount of Gain or Loss (+ or -)		+ .25		+ .68		+ .96		+ .98		+ .97		+ .69

N* = Number of Students Tested

Mean = Mean grade equivalent score

Table 15

California Achievement Test - Total Language
Section, Theodore Roosevelt Brdg
School

Test Periods	GRADE LEVEL											
	3		4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (Sept. 4, 1971)	2	2.3	5	2.4	7	2.5	10	4.4	22	4.7	24	5.2
Post-Test (May 10, 1972)	4	2.9	5	3.0	7	4.1	9	5.5	22	5.5	26	6.2
Amount of Gain or Loss (+ or -)		+ .6		+ .6		+ 1.6		+ 1.1		+ .8		+ 1.0

N* = Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test total reading scores for grades 3-8 at Theodore Roosevelt Boarding School are summarized in Table 14. The results show there were relatively small (+.25 years) increases in reading in grade 3. Pupils in grades 4 and 8 improved their reading scores by .68 and .69 years respectively. There were more pronounced improvements in pupils in grade 5 (+.96 years), grade 6 (+.98 years), and grade 7 (+.97 years).

The pre-post California Achievement Test total language scores are summarized in Table 15. An examination of Table 15 shows there was somewhat more improvement in language than there was in reading. Pupils in grade 3 increased their language scores .6 years, pupils in grade 4 increased their scores .7 years, pupils in grade 5 increased their scores 1.3 years, pupils in grade 6 increased their scores 1.2 years, pupils in grade 7 increased their scores .9 years, and pupils in grade 8 increased their scores 1.1 years. One should be cautioned when interpreting the language gain scores since there is some unknown amount of invalidity to the results in the grades where the same pupils did not receive the pre and post-tests.

H O P I D A Y S C H O O L

Component I Reading Improvement

I. Vital Statistics

A. School Name and Address:	Hopi Day School Hopi Agency Oraibi, Arizona 86039
B. Component Cost:	$33,447.00
C. Staffing Pattern:	Professional 2 Reading Teachers (1740) GS-9 Paraprofessional 3 Teacher Aides (Title I)
D. Number of Student Participants:	79 (RP)
E. Contact Person:	Mr. Ray K. Wood
F. Operational Period:	October 19, 1971
G. Years in Progress:	One

II. Component Objectives

To increase the reading scores of 79 students, grade 4 - 8, by 1.5 or more years as measured by the California Achievement Test.

III. Evaluation

Pre-mid-post, California Achievement Test, total Reading Battery.

IV. Procedures

Activity I

This activity was designed around a laboratory utilizing several systems which incorporated special equipment. The laboratory was

separate from the regular classrooms. The average teacher to student ratio was 1 to 16. The average aide to student ratio was 1 to 8. The students were involved in this activity 5 periods per week 45 minutes per period.

Activity II

A supplementary reading room designed and equipped to encourage reading for enjoyment was established. The materials utilized were high interest - low reading level and consisted of printed materials and tapes. Students participated 30-45 minutes daily.

Table 16

California Achievement Test
Total Reading 1963 Norms
Hopi Day School

Test Periods	GRADE LEVEL									
	4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)	5	3.10	4	4.38	5	4.74	34	5.07	27	6.01
Post-Test (April 1972)	5	3.76	4	4.45	5	5.34	34	5.45	27	6.18
Amount of Gain or Loss (+ or -)		+.66		+.07		+.60		+.38		+.17

N* = Number of Students Tested
Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test Total Reading scores for grades 4 - 8 at Hopi Day School are presented in Table 16 . The results in Table 16 show relatively small gains in reading in grades

5, 7, and 8 (+.07 to +.38 years) and moderate gains in grades 4 and 6 (+.60 to .66 years).

H O T E V I L L A D A Y S C H O O L

Reading Laboratory

I. Vital Statistics

A.	Name and Adress:	Hotevilla Day School Hopi Agency Hotevilla, Arizona 86030
B.	Component Cost:	$29,788.00
C.	Staffing Pattern:	Professional 1 Reading Teacher Paraprofessional 1 Teacher Aide
D.	Number of Student Participants:	28
E.	Contact Person:	Mr. Vernon Masayesva
F.	Operational Period:	September to May
G.	Years in Operation:	One

II. Component Objectives

To increase the reading scores of 28 students, grades 2 to 6, to appropriate grade level as measured by the California Achievement Test - Reading Battery.

III. Evaluation

Pre-Mid-Post California Achievement Test Reading Battery.

IV. Procedures

Activity I

This activity involved a reading laboratory separate from the regular classroom. The laboratory was equipped with the comprehensive EDL system. The average teacher to student and aide to student ratio was 1 to 6. The students participated in the laboratory activity 5 days a week, 1 hour per day.

Table 17

California Achievement Test
Total Reading 1963 Norms
Hotevilla Day School

Test Periods	GRADE LEVEL							
	1		2		3		4	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 7, 1971)	2	.30	3	1.33	2	1.30	9	2.98
Post-Test (April 7, 1972)	2	1.00	3	1.77	2	2.25	9	3.51
Amount of Gain or Loss (+ or -)		+.70		+.44		+.95		+.53

N* - Number of Students Tested
Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test total reading scores for grades 1 - 4 at Hotevilla Day School are presented in Table 17 . The results summarized in Table 17 show moderate increases in reading performance in grades 1, 2, and 4 and more than an academic years improvement in grade 3. It should be pointed out that the mean for the pre-test in grade 1 was only .30 which means that the pupils in the 1st grade may not have understood enough English to take the test, or they may not have understood the directions. Thus the .70 years increase from pre to post test in grade 1 may be an overestimate of the pupils increases in reading performance.

K E A M S C A N Y O N B O A R D I N G S C H O O L

Reading Laboratory

I. Vital Statistics

A. Name and Address:	Keams Canyon Boarding School Hopi Agency Keams Canyon, Arizona 86034
B. Component Cost:	$71,529.00
C. Staffing Pattern:	Professional 1 Reading Specialist (Title I) Paraprofessional 2 Teacher Aides (Title I) 2 Dormitory Aides (Title I)
D. Number of Student Participants:	197
E. Contact Person:	Mrs. Grace Christiansen
F. Operational Period:	October 25, 1971
G. Years in Cperation:	One

II. Component Objectives

To increase the reading scores of 197 students, grade level 1 - 8, to grade level as measured by the reading section of the Stanford Early School Achievement Test for grades 1 and 2 and the reading section of the California Achievement Test for grades 3 - 8.

III. Evaluation

Pre-Mid-Post Stanford Early Achievement Test - Reading Section.

Pre-Mid-Post California Achievement Test - Reading.

IV. Procedures

Activity I

This activity incorporated an EDL equipped laboratory separate from the regular classroom. The average teacher to student ratio was 1 to 25. The average aide to student ratio was 1 to 12. The students participated in this activity one hour per day, five days per week.

Activity II

Students were involved in a reading resource center 2½ hours per week and in dormitory centers for three hours per week in the evening hours. These centers offered informal activities related to improving reading achievement. The reading resource center was staffed by an aide as were the dormitory centers.

Activity III

The Art Van staff provided services sixteen days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program. The staff worked with dorm students and dorm personnel on a variety of specific projects such as: cloth banners, clay activities, leather works, decoupage, as well as decorations and designs appropriate for dormitory rooms.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 18

California Achievement Test - 1963 Norms, Total Reading, Keams Canyon Boarding School

Test Periods	GRADE LEVEL									
	4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (10/5/71)	16	3.64	25	3.68	16	4.88	27	4.02	20	4.27
Post-Test (4/5/72)	16	4.12	25	4.97	16	5.38	27	5.68	20	5.79
Amount of Gain or Loss (+ or -)		+.48		+1.29		+.50		+1.66		+1.52

N* = Number of Students Tested
Mean = mean grade equivalent score

V. Discussion

The pre-post California Achievement Test - Total Reading scores for grades 4 to 8 at Keams Canyon Boarding School are summarized in Table 18. An examination of Table 18 shows moderate increases in reading performance in grade 4 (.48 years) and grade 6 (.50 years) and profound increases in grade 5 (1.29 years), grade 7 (1.66 years), and grade 8 (1.52 years). It should be pointed out, however, that even with such spectacular increases in reading the pupils were still reading more than three years below the national norm in grade 8 and more than two years below the national norm in grade 7.

M O E N C O P I D A Y S C H O O L

Understanding Through Reading
and Math

I. Vital Statistics

A. School Name and Address:	Moencopi Day School Hopi Agency Tuba City, Arizona 86045
B. Component Cost:	$18,737.00
C. Staffing Pattern:	Paraprofessionals - One Teacher Aide (Title I)
D. Number of Student Participants:	20
E. Contact Person:	Heber Dann, Principal
F. Operational Period:	October to May
G. Years in Operation:	One

II. Component Objectives

To bring twenty (20) students in grades 1 to 3 to appropriate grade level achievement as measured by the California Achievement Test - reading and total language sub-scores.

To bring fourteen (14) students in grades 1 to 3 to appropriate grade level achievement as measured by the California Achievement Test - mathematics sub-scores.

III. Evaluation

Pre-Mid-Post California Achievement Test - Reading Sub-scores

Pre-Mid-Post California Achievement Test - Total Language Sub-scores

Pre-Mid-Post California Achievement Test - Mathematics Sub-scores

IV. Procedures

Activity I

A bilingual tutoring aide utilizing a combination of systems which incorporated specialized equipment conducted language training in a laboratory separate from the regular classroom. The average aide to student ratio was 1 to 7. The students were involved five days a week, 45 minutes a day.

Activity II

A bilingual tutoring aide conducted mathematics tutoring using several systems and special equipment.

The average tutor-student ratio was 1 to 5. Each student spent 45 minutes a day, five days a week in the activity.

Table 19

California Achievement Test - 1957
Edition, Complete Battery,
Moencopi Day School

Test Periods	GRADE LEVEL					
	1		2		3	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 1971)	6	.9	12	1.4	4	2.7
Post-Test (April 1972)	3	1.3	11	1.8	5	3.0
Amount of Gain or Loss (+ or -)	———	+ .4	———	+ .4	———	+ .3

N* = Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test - Complete Battery results for grades 1 to 3 for Moencopi Day School are summarized in Table 19. The results reports in Table 19 show that pupils in grades 1 and 2 increased their grade placement by .4 years, and pupils in grade 3 increased their grade placement by .3 years. However, these increases were not sufficiently high enough to reach grade level in any of the grades. The school did not report sub-test scores thus it is not known if the objectives of the program were met.

P O L A C C A D A Y S C H O O L

Project Read

I. Vital Statistics

A.	Name and Address:	Polacca Day School Hopi Agency Polacca, Arizona 85040
B.	Component Cost:	$39,950.00
C.	Staffing Pattern:	Professional 1 Reading Specialist (1740) Paraprofessional 2 Teacher Aides (Title I)
D.	Number of Student Participants:	83
E.	Contact Person:	Fritz Poocha
F.	Operational Person:	September to May
G.	Years in Operation:	1½

II. Component Objectives

Twenty-four 3rd grade students will increase their scores by a mean of 1.5 years in reading as measured by the California Achievement Test.

Thirty-six 4th and 5th grade students will increase their scores by a mean of 1.8 years in reading as measured by the California Achievement Test.

Twenty 6th grade students will increase their reading scores by a mean of 2.6 years as measured by the California Achievement Test.

Twelve 3rd grade students will increase their language achievement scores by a mean of 1.4 years as measured by the California

Achievement Test.

Five 4th grade students will increase their language achievement scores by 1.7 years as measured by the California Achievement Test.

Seven 5th grade students will increase their language achievement scores by 1.5 years as measured by the California Achievement Test.

Seventeen 6th grade students will increase their language achievement scores 2.9 years as measured by the California Achievement Test.

Table 20

California Achievement Test - Language
Polacca Day School

Test Periods	GRADE LEVEL							
	3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (April 1971)	13	2.78	27	3.78	35	4.42	15	5.98
Post-Test (April 1972)	13	3.32	27	4.90	35	5.21	15	6.51
Amount of Gain or Loss (+ or -)	—	+.54	—	+1.12	—	+.79	—	+.53

N* - Number of Students Tested

Mean = Mean grade equivalent score

Table 21

Stanford Diagnostic Reading Test
Polacca Day School

Test Periods	GRADE LEVEL							
	3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (January 1972)	14	2.13	27	2.86	34	3.56	15	4.60
Post-Test (April 1972)	14	2.52	27	3.49	34	3.60	15	4.80
Amount of Gain or Loss (+ or -)		+.39		+.63		+.04		+.20

N* - Number of Students Tested Mean = Mean grade equivalent score

Table 22

California Achievement Test - 1963
Norms, Total Reading
Polacca Day School

Test Periods	GRADE LEVEL							
	3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (April 1971)	14	2.48	22	3.47	27	4.04	13	5.00
Post-Test (April 1972)	14	3.49	22	4.10	27	4.66	13	5.63
Amount of Gain or Loss (+ or -)		+1.01		+.63		+.62		+.63

N* - Number of Students Tested Mean = Mean grade equivalent score

V. Discussion

Table 22 presents the California Achievement Test total reading scores for grades 3 - 6 at Polacca. An examination of Table 22

shows moderate gains of .62 to .63 years for grades 4, 5, and 6 and substantive gains of 1.01 years for pupils in grade 3.

The California Achievement Test language results are reported in Table 20. These results show moderate gains of .54 and .53 years respectively in grades 3 and 6 and a gain of .79 years in grade 5. The largest increases in language were made by pupils in grade 4 who gained 1.12 years.

The Stanford Diagnostic Reading Test scores are summarized in Table 21. These results show rather disappointing increases in reading at first glance, however, one must remember that the pre-test was administered in January. Thus these results reflect a three month program. In the three months grade 3 pupils increased their reading scores .39 years, grade 4 pupils increased theirs .04 years, and grade 6 pupils increased theirs .20 years.

S E C O N D M E S A D A Y S C H O O L

Component I Reading and Communication Skills

I. Vital Statistics

A.	School Name and Address:	Second Mesa Day School Hopi Agency Second Mesa, Arizona 860[illegible]
B.	Component Cost:	$62,012.00
C.	Staffing Pattern:	Professional 1 reading specialist (Title I) 1 language specialist (Title I) 1 music teacher (Title I) Paraprofessional 2 teacher aides (Title I)
D.	Number of Student Participants:	51
E.	Contact Person:	Wellesley Hodgins, Principal
F.	Operational Period:	September to May
G.	Years in Operation:	One

II. Component Objectives

Twelve 4th grade students will raise their reading and language scores 1.7 years as measured by the California Achievement Test Total Reading and Language subscores. Twenty 5th grade students will raise their reading and language scores 1.8 years as measured by the California Achievement Test Total Reading and Language subscores. Nineteen 6th grade students will raise their reading and

language scores by 2.0 years as measured by the California Achievement Test Total Reading and Language subscores.

III. Evaluation

Pre-Mid-Post, California Achievement Test

IV. Procedures

Activity I

This activity was located in a laboratory which was separate from the regular classrooms and incorporated several systems involving special equipment designed to remediate specific reading problems. Laboratory activities involved both reading and language exercises. Teacher to student and aide to student ratios were 1 to 9. Students were involved in 1 hour of reading and language remediation daily.

Activity II

This activity was designed to provide students with the opportunity of language expression through music activities. Each student was involved 2½ hours weekly.

Activity III

The art van staff provided services 6 days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These

projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 23

California Achievement Test
Second Mesa Day School
Total Reading 1963 Norms

Test Periods	GRADE LEVEL					
	4		5		6	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 12, 1971)	16	3.06	12	3.91	16	4.49
Pre-Test (May 15, 1971)	16	3.73	12	4.82	16	5.49
Amount of Gain or Loss (+ or -)	____	+.67	____	+.91	____	+1.00

N* = Number of Students Tested

Mean = Mean grade equivalent score

Table 24

California Achievement Test
Second Mesa Day School
Total Language 1963 Norms

Test Periods	GRADE LEVEL					
	4		5		6	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 12, 1971)	16	3.3	13	4.5	16	4.7
Post-Test (May 15, 1972)	16	4.3	12	5.8	17	6.4
Amount of Gain or Loss (+ or -)	———	+1.0	———	+1.3	———	+1.7

N* = Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test - Total Reading scores for grades 4-6 at Second Mesa Day School are presented in Table 23. An examination of Table 23 shows that pupils in grade 4 had a moderate improvement in reading (+.67 years) and pupils in grade 5 and grade 6 had substantial increases in reading (+.91 and +1.00 years respectively).

In addition, Table 24 presents a summary of the pre-post California Achievement Test - Total Language scores. These results shows pupils in grades 4 increased their language performance 1.00 years, pupils in grade 5 increased their scores 1.3 years and pupils in grade 6 increased their scores 1.7 years. In grade 5 the increase was almost sufficient to reach the grade level national norm.

S T E W A R T I N D I A N H I G H S C H O O L

Reading Laboratory - Resource Center

I. Vital Statistics

A. School Name and Address:	Stewart Indian High School Nevada Agency Stewart, Nevada 89437
B. Component Cost:	
C. Staffing Pattern:	Professional - Two Reading Teachers (Title I) One Reading Teacher (Title I) Paraprofessional - One Teacher Aide (Title I)
D. Number of Student Participants:	125
E. Contact Person:	William C. Whipple, Education Program Administrator
F. Operational Period:	October 23, 1971
G. Years in Operation:	Two

II. Component Objectives

To raise reading achievement scores as measured by the California Achievement Test, Reading subtests, Stanford Diagnostic Reading Test, Wide Range Vocabulary Test as follows:

25 Pre-high students	4.9 years
25 Ninth grade students	3.0 years
25 Tenth grade students	2.5 years
25 Eleventh grade students	2.0 years
25 Twelfth grade students	1.5 years

III. Evaluation

Pre-Post California Achievement Test, Reading Subtest

Pre-Mid-Post Wide Range Vocabulary Test

IV. Procedures

Activity I

This activity incorporated a combination of systems utilizing special equipment and materials in a setting separate from the regular classroom. Teacher to student ratio was 1 to 8 while aide to student ratio was 1 to 25. Students were involved 30 minutes per day, five days per week.

Activity II - Art Van

Table 25

California Achievement Test
Reading Battery, '70 Norms

Test Periods	GRADE LEVEL									
	Pre High		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (10-23-71)	12	4.4	34	4.0	12	3.8	19	4.7	12	4.4
Post-Test (4-5-72)	8	5.7	31	6.7	12	5.0	16	6.6	12	6.4
	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)	+	+1.3		+2.7		+1.2		+1.9		+2.0

N* = Number of Students

Mean = Mean grade equivalent score

Table 26

Wide Range Reading Test

Test Periods	GRADE LEVEL									
	Pre-High		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 24 & 25, 1971)	2**	5.1	34	5.8	11	5.1	19	5.5	13	5.8
Post-Test (May 9, 1972)	8	6.9	30	9.2	11	7.7	17	8.1	12	9.2
	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		+1.8		+3.4		+2.6		+2.6		+3.4

N* = Number of Students ** = Test results lost

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test reading scores for Stewart Indian High School are summarized in Table 25. An examination of all the pre-high to 12th grade average gain scores shows that they all increased by one or more months for each month the pupils were in school. The most spectacular increase was in grade 9 where the pupils increased their reading scores an average of 2.7 grade levels. The smallest increase (if one wants to call a 1.2 grade level increase small) was reported for pupils in grade 10. However since the same number of pupils were not pre and post tested in the Pre-high, 9th and 11th grades, these results should be interpreted with caution.

The pre-post Wide Range Reading Test results are summarized in Table 26. These results show spectacular increases for the pre-high to 12th grade pupils ranging from a low of 1.8 grades in pre-high pupils to a high of 3.8 grades for 9th grade pupils.

P A P A G O A G E N C Y S C H O O L S

Innovative Reading Instruction Right
to Read

I. Vital Statistics

A. School Name and Address:	Papago Agency P.O. Box 578 Sells, Arizona 85634
B. Component Cost:	$129,659.00
C. Staffing Pattern:	Professional - Nine Teachers (1740) Two Reading Specialist (Title I) Paraprofessional - Twelve Teacher Aides (Title I)
D. Number of Student Participants:	313
E. Contact Person:	Mitchell Parks
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

To raise the reading scores of 313 students, grades B-8, to grade level or above as measured by the California Achievement Test, and Botel Reading Inventory.

III. Evaluation

Pre-Mid-Post California Achievement Test

Pre-Mid-Post Botel Reading Inventory

IV. Procedures

Activity I

This activity involved EDL's LISTEN LOOK LEARN System in nine laboratories contained within nine regular classrooms. Teacher to student

and aide to student average ratio was 1 to 23. The students were involved in this activity for five periods per week, 2½ hours per period. This activity was designed for students in grades 1 to 3.

Activity II

This activity involved a combination of systems utilizing specialized equipment in a laboratory setting separate from the regular classroom. Average teacher to student and aide to student ratio was 1 to 9. The instructional time was one hour per day, five days per week. This activity was designed for students in grades 4 through 8.

Activity III - Art Van

The Art Van staff provided services fourteen days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 27

California Achievement Test - Total Reading, 1970 Norms, Vaya Chin Day School

Test Periods	Second Grade	
	N*	Mean
Pre-Test (9/16/71)	10	1.65
Post Post-Test (5/5/72)	10	1.40
Amount of Gain or Loss (+ or -)	—	— -.25

N* - Number of Students Tested

Mean - Mean grade equivalent score

Table 28

T.O.B.E. Language Sub-Test (Reported in Stanines), Vaya Chin Day School

Test Periods	Beginners		First Grade	
	N*	Mean	N*	Mean
Pre-Test (9/16/71)	13	1.69	12	1.25
Post-Test (5/15/72)	14	3.35	13	2.61
Amount of Gain or Loss (+ or -)	—	— +1.66	—	— +1.36

N* - Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post California Achievement Test - Reading results for Vaya Chin Day School are presented in Table 27 . The reported results are for the second grade and they show a drop in reading scores from pre-post of one-fourth of a grade level.

The Test of Basic Experience (T.O.B.E.) Language sub-test scores for Beginners and 1st grade pupils are reported in Table 28. These results show that Beginners increase their results 1.66 stanines and pupils in grade 1 increased their results 1.36 stanines.. However these increases still left Beginners and 1st graders below the national norm of the 4th and 5th stanine. On the other hand, the results may be misleading to an unknown degree since all pupils did not receive both the pre and post tests.

Table 29

California Achievement Test - Total Reading
1970 Norms, Kerwo Day School

Test Periods	GRADE LEVEL							
	2		3		4		5	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/16/71)	9	1.82	6	1.50	3	2.93	5	4.62
Post-Test (5/15/72)	9	2.27	6	1.93	3	3.90	5	4.38
Amount of Gain or Loss (+ or -)	—	+.45	—	+.43	—	+.97	—	-.24

N* - Number of Students Tested
Mean = Mean grade equivalent score

Table 30

T.O.B.E. Language Sub-Test (Reported in Stanines)
Kerwo Day School, FY 1972

Test Periods	GRADE LEVEL			
	Beginner		First	
	N*	Mean	N*	Mean
Pre-Test (9/16/71)	7	2.71	6	2.50
Post-Test (5/15/72)	9	4.10	11	3.36
Amount of Gain or Loss (+ or -)	—	+1.39	—	+0.86

N* - Number of Students Tested

Discussion

The pre-post California Achievement Test - Total Reading results for grades 2 and 5 at Kerwo Day School are summarized in Table 29. An examination of Table 29 shows moderate increases in the pupils reading performance in grade 2 and 3 and substantial improvement (.97 years) in grade 4. However, in grade 5 there was a drop in reading performance from pre to post tests of almost one-fourth year.

The T.O.B.E. Language sub-test results reported for Beginners and 1st grades are somewhat better as they show increases for Beginners of 1.39 stanines and for 1st graders of .86 stanines (see Table 30). However, the results may not be a true picture of the actual changes since all pupils did not receive both the pre and post tests.

Table 31

California Achievement Test - Total Reading
1970 Norms, Santa Rosa Ranch Day Schl

Test Periods	GRADE LEVEL									
	2		3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/16/71)	3	.93	3	1.50	4	2.70	1	1.80	4	3.98
Post-Test (5/15/72)	3	2.10	3	2.87	4	3.13	1	2.60	4	4.45
Amount of Gain or Loss (+ or -)	——	+1.17	——	+1.37	——	+ .43	——	+ .80	——	+ .47

N* = Number of Students Tested

Mean = Mean grade equivalent score

Table 32

T.O.B.E. Language Sub-Test**, Santa Rosa Ranch Day School

Test Periods	GRADE LEVEL			
	Beginners		1st	
	N*	Mean	N*	Mean
Pre-Test (9/16/71)	2	4.00	2	1.00
Post-Test (5/15/72)	3	6.00	2	4.00
Amount of Gain or Loss (+ or -)		+2.00		+3.00

N* - Number of Students Tested

Mean = Mean grade equivalent score

Discussion

The pre-post California Achievement Test total reading results for grades 2 - 6 at Santa Rosa Ranch are summarized in Table 31 . The results a reported in Table 31 show that pupils in grades 4, 5, and 6 had moderate increases of .43 to .80 years in reading ability and pupils in grades 2 and 3 had marked improvement of 1.17 and 1.37 years respectively in reading performance.

The T.O.B.E. Language Sub-test results for Beginners and 1st graders (see Table 32) shows increases of 2.00 and 3.00 stanines respectively. The results for Beginners should be interpreted with caution since one pupil was added to the post-test.

Table 33

California Achievement Test - Total
Reading by Grade Level - 1970
Norms, Santa Rosa Brdg
& Day School

Test Periods	GRADE LEVELS													
	2		3		4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/16/71)	21	2.44	35	1.46	11	.98	8	2.21	21	2.82	23	3.79	22	4.21
Post-Test (5/15/72	21	2.36	35	2.10	11	2.57	8	2.81	21	3.52	23	4.00	22	4.68
Amount of Gain or Loss (+-)	———	- .08	———	+ .64	———	+1.59	———	+ .60	———	+ .70	———	+ .21	———	+ .47

N* = Number of Students Tested

Mean = Mean grade equivalent score

Table 34

T.O.B.E. Language Sub-Test (Stanines)
Santa Rosa Boarding/Day School

Test Periods	GRADE LEVEL			
	Beginners		1st	
	N*	Mean	N*	Mean
Pre-Test (9/16/71)	2	5.00	27	1.78
Post-Test (5/15/72	2	7.00	32	3.28
Amount of Gain or Loss (+ or -)	—	—	—	—
		+2.00		+1.50

N* - Number of Students Tested Mean = Mean grade equivalent score

The California Achievement Test - Total Reading for grades 2 - 8 at Santa Rosa Boarding/Day School are reported in Table 33. The largest gains were achieved by pupils in grade 4 (1.59 years). Pupils in grade 2 decreased in reading as measured by the California Achievement Test, however the pre-test mean of 2.44 is exceptionally high and may reflect invalid test results. Thus the results for grade 2 should be interpreted with caution. Pupils in grade 7 only improved .21 years in reading ability.

The T.O.B.E. Language Sub-test results are reported in Table 34. These results show that beginners improved their language achievement 2.0 stanines and 1st grade pupils increased theirs 1.5 stanines.

P I M A A G E N C Y S C H O O L S

Remedial Reading and Language
Skills Improvement

I. Vital Statistics

A. School Name and Address:	Pima Agency Schools Pima Agency Sacaton, Arizona 85247
B. Component Cost:	$82,793.00
C. Staffing Pattern:	Professional - Four Reading Teachers (One 1740 and three Title I) Paraprofessional - Four Teacher Aides (Title I)
D. Number of Student Participants:	227
E. Contact Person:	Patricia Higginbotham
F. Operational Period:	October to May
G. Years in Operation:	One

II. Component Objectives

One hundred fifty-two (152) students, grades 1 to 3, will read on grade level as measured by the California Achievement Test - Reading sub-tests.

Seventy-five (75) students, grades 4 to 7, will increase their reading achievement scores by 2.0 years as measured by the California Achievement Test - Reading sub-tests.

III. Evaluation

Pre-Mid-Post California Achievement Test - Reading

IV. Procedures

Activity I

This activity was centered in laboratories separate from the regular classroom setting in all schools excluding one. The instructional methodology included tutoring, language experience and various other approaches but utilized little or no special equipment which characterizes such systems as EDL or Systems 80. Average teacher to student ratio was 1 to 10. Average aide to student ratio was 1 to 12. The students participated in this activity approximately one hour per day, five days per week.

Activity II

This activity consisted of an intensive extension of Activity I for students with the greatest need. These students participated on an average of one hour daily.

Activity III - Art Van

The Art Van staff provided services nine days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Table 35

California Achievement Test - Total Reading, 1963 Norms, Gila Crossing Day School

Test Periods	GRADE LEVEL							
	2		3		4		5	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 6 1971)	14	1.44	4	2.52	3	3.93	3	4.00
Post-Test (May 17, 1972)	14	2.08	4	2.90	3	4.43	3	4.87
Amount of Gain or Loss (+ or -)		+ .64		+ .38		+ .50		+ .87

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

V. Discussion

The pre-post California Achievement Test - Total Reading scores for grades 2 - 5 at Gila Crossing Day School are presented in Table 35. The results reported in Table 35 show moderate increases in reading in grade 2 (.64 years) and grade 5 (.87 years) and somewhat smaller increases in grade 3 (.38 years) and grade 4 (.50 years).

Table 36

California Achievement Test - Total Reading, 1963
Norms, Casa Blanca Day School

Test Periods	GRADE LEVEL					
	2		3		4	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 8, 1971)	8	1.21	4	2.28	12	2.60
Post-Test (May 17, 1972)	8	1.56	4	2.87	12	3.82
Amount of Gain or Loss (+ or -)		+ .35		+ .59		+ 1.22

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

Discussion

Table 36 presents the California Achievement Test reading results for grades 2, 3 and 4 at Casa Blanca Day School. The largest gain scores were in grade 4 with a mean gain of 1.22 years whereas in grade 2 the gain was only .35 years. Pupils in grade 3 increased their reading scores .59 years.

Table

California Achievement Test - Total Reading
1963 Norms, St. Johns Indian School

Test Periods	GRADE LEVEL											
	2		3		4		5		6		7	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 8, 1971)	7	1.61	8	2.25	10	3.47	7	4.10	5	5.56	9	5.38
Post-Test (May 17, 1972)	7	2.57	8	3.55	10	4.37	7	4.90	5	6.10	9	6.62
Amount of Gain or Loss (+ or -)		+ .96		+1.30		+ .90		+ .80		+ .54		+ 1.24

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

Discussion

The pre-post California Achievement Test - Total Reading results for St. John's Indian School are reported in Table 37. An examination of Table 37 shows that the most significant gains were made in grade 3 (+1.30) and grade 7 (+1.24). The least gain was in grade 6 (+.54).

Table 38

California Achievement Test - Total Reading, 1963 Norms, Blackwater Demonstration Day School

Test Periods	First Grade	
	N*	Mean
Pre-Test (1/12/72)	3	1.17
Post-Test (5/17/72)	3	1.97
Amount of Gain or Loss (+ or -)		+ .80

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

Discussion

The pre-post California Achievement Test - Total Reading results for grade 1 at Blackwater are summarized in Table 38. The results show that the pupils were 4 months behind grade level on the pre-test and that in the 4 months between pre and post tests the pupils increased their reading scores to slightly above grade level (1.9 is grade level in the 1st grade in May). This means that the pupils gained two months in their reading for every month they spent in the program. Thus the objective of having the pupils read at grade level at the end of the year was met and even surpassed.

S A L T R I V E R D A Y S C H O O L

Reading

I. Vital Statistics

A. School Name and Address:	Salt River Day School Route 1, Box 117 Scottsdale, Arizona 85256
B. Component Cost:	$49,443.00
C. Staffing Pattern:	Professional - One Reading Teacher (Title I) Paraprofessional - Four Teacher Aides (Title I) Seven Tribal Artisans (Title I)
D. Number of Student Participants:	66
E. Contact Person:	Principal
F. Operational Period:	August 2, 1971
G. Years in Operation:	One

II. Component Objectives

Sixty-six (66) students, grades 1 to 6, will increase their mean reading scores to grade level as measured by the California Achievement Test (Reading Sub-scores).

Sixty-six (66) students, grades 1 to 6, will increase their English language proficiency mean scores to grade level as measured by the California Achievement Test - Total Language Sub-Section.

III. Evaluation

Pre-Mid-Post California Achievement Test - Reading & Language

IV. Procedures

Activity I

This activity was centered in a laboratory separate from the regular classrooms. This laboratory incorporated a combination of systems utilizing special equipment and language experience activities. The teacher to student and aide to student ratios were respectively 1 to 11 and 1 to 6. Students were involved in this activity five days per week, 50 minutes per day.

Activity II

Two aides, in addition to their laboratory duties, assisted the target students in the regular classroom by providing experiences which insured continuity between laboratory and regular program activities.

Activity III

One aide was used to offer library experiences four hours weekly. In addition local native artisans presented tribal culture, customs, arts, and crafts to the students one day per week.

Activity IV - Art Van

The Art Van staff provided services six days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 39

California Achievement Test - Total Reading, 1963 Norms
Salt River Day School

Test Periods	GRADE LEVEL											
	1		2		3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/18/71)	15	.63	11	.96	11	1.74	12	2.49	12	3.01	12	3.86
Post-Test (5/1972)	15	1.07	11	1.69	11	2.00	12	2.65	12	3.22	12	4.61
Amount of Gain or Loss (+ or -)		+ .44		+ .73		+ .26		+ .16		+ .21		+ .75

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

V. Discussion

The California Achievement Test - Total Reading scores for grades 1 to 6 for Salt River Day School are reported in Table 39. The results show that pupils in grade 2 and grade 6 had moderate increases in reading of .73 and .75 years respectively whereas pupils in grades 3, 4, and 5 had somewhat less gains in reading ability of only .26, .16, and .21 years respectively.

S H E R M A N I N D I A N H I G H S C H O O L

Component II: Reading Development Laboratory

I. Vital Statistics

A. School Name and Address:	Sherman Indian High School 9010 Magnolia Avenue Riverside, California 92503
B. Component Cost:	$30,607.00
C. Staffing Pattern:	Professional - One Language Arts Specialist (1/5 time) (1740) Two Reading Teachers (1740) Paraprofessional - Two Teacher Aides (1740)
D. Number of Student Participants:	250
E. Contact Person:	Michael Ragsdale
F. Operational Period:	
G. Years in Operation:	Two

II. Component Objectives

One hundred twenty-five (125) students, grades 9 and 10, will increase their reading scores 3.0 years as measured by California Achievement Test, Reading sub-scores.

Seventy-five (75) eleventh grade students will increase their reading scores 2.5 years as measured by the California Achievement Test, Reading sub-scores.

Fifty (50) twelfth grade students will increase their reading scores 2.0 years as measured by the California Achievement Test, Reading sub-scores.

III. Evaluation

Pre-Mid-Post California Achievement Test, Reading sub-scores

IV. Procedures

Activity I

This activity involved two laboratories: one utilizing EDL's Learning 100; the other utilizing EDL's Reading 300. The laboratories were located separate from the regular classrooms. Teacher to student and aide to student ratio was 1-15. Students were involved in this activity 45 minutes per day, five days per week.

Table 40

California Achievement Test
Reading

Test Periods	GRADE LEVEL							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9-10-71)	35	5.75	55	6.40	39	6.70	32	6.75
Post-Test (4-2-72)	35	6.90	55	7.20	39	7.40	32	7.30
Amount of Gain or Loss (+ -)		+1.15		+ .80		+ .70		+ .55

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

V. Discussion

The pre-post California Achievement Test total reading scores for Sherman Indian High School are reported in Table 40. The results show that pupils in grade 9 increased their reading scores an average of 1.15 years which is an increase of approximately 1.6 months for every month in the program. In addition, pupils in grade 10 increased their scores .70 years, and pupils in grade 12 increased

their scores .55 years. While the average post-test reading scores were higher than the pre-test scores, the gains were not sufficient to raise the pupils scores to the national average.

S U P A I D A Y S C H O O L

Component I - Remedial Reading

I. Vital Statistics

A.	School Name and Address:	Supai Day School Supai, Arizona 86435
B.	Component Cost:	$23,509.00
C.	Staffing Pattern:	Professional - One Reading Specialist (Title I) Paraprofessional - One Teacher Aide (Title I)
D.	Number of Students Participants:	46
E.	Contact Person:	Mrs. Roberta Hunt, Principal
F.	Operational Period:	
G.	Years in Operation:	One

II. Component Objectives

Forty-six (46) children, grades B-4, will increase their reading achievement scores to grade level as measured by the California Achievement Test, Reading subtests.

III. Evaluation

Pre-Mid-Post California Achievement Test, Reading Subtests

IV. Procedures

Activity I

This activity was designed around a highly structured comprehensive system utilizing E.D.L.'s LISTEN LOOK LEARN. The laboratory was incorporated into the regular classroom setting. Teacher to student and aide to student ratio was 1 to 9. The students were involved 2½ hours daily five days per week.

Activity II - Art Van

The Art Van staff provided services four days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concepts building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 41

California Achievement Test
Total Reading, 1970 Norms

Test Periods	GRADE LEVEL					
	2		3		4	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (10/19/71)	12	1.09	10	1.21	4	2.75
Post-Test (5/17/72)	12	1.94	12	2.18	6	3.98
Amount of Gain or Loss (+ or -)	—	+ .85	—	+ .97	—	+1.23

N* - Number of Students Tested
Mean* - Mean Grade Equivalent Score

V. Discussion

The pre-post California Achievement Test - Total Reading scores for 2nd to 4th grade pupils attending Supai Day School are summarized in Table 41. These results show that pupils in all three grades had average gains in reading that exceeded one month gain for every

month in school. Pupils in grade two increased their reading scores an average of .85 grades, pupils in grade 3 increased theirs an average of .97 grades, and pupils in grade 4 increased theirs an average of 1.23 grades even though only seven months had elapsed between pre and post tests.

COMPARISON OF READING COMPONENTS

Chapter IV-B

I N T R O D U C T I O N

The results presented in this section consist of a comparison of the reading projects between schools and types of projects by grade level. This section is divided into three parts. The first part consists of comparisons between schools using the 1963 norms of the California Achievement Test (CAT); the second contains comparisons of schools using the 1970 norms of the CAT; and the third consists of a comparison of reading laboratories utilizing one or more of Educational Developmental Laboratorys' (EDL) Systems, reading laboratories utilizing a combination of materials and special purpose equipment, and reading laboratories utilizing various types of materials but little or no special purpose equipment. The reason for the separation of parts I and II by CAT norms is that the norms are not comparable. The 1970 revision of the CAT was a substantive revision and a year's growth is not the same as a year's growth on the 1963 norms. The new edition has been made more relevant as a measurement instrument for measuring pupils in today's content.

Not all schools and grade levels are compared in this section because of missing data and too few pupils for which data was reported. An arbitrary cut-off of four pupils per grade level per school was used as a basis for inclusion in the comparisons. Although four pupils per cell in the comparison results in a very low power rating, power in this first exploratory study with the below mentioned difficulties with

the data is not of primary concern. The major purpose of this data is to give us some prior probability data to be used to compare with FY 1972-73 data. This is the first year of reading projects except for Polacca and Santa Rosa Boarding School and these were only one-half year projects in FY 1970-71 and no CAT data was reported.

There are a number of inherent weaknesses in the present study which should be clarified at the beginning. First of all, any time one school is compared with another school there are factors extraneous to the treatments that may reflect in the results. For example, the pupils in one of the schools may be "culturally retarded", that is retarded in reading because of a lack of exposure to previous reading possibilities; and pupils in the other school may be retarded in reading due to physiological reasons, such as vision problems or mental retardation. Thus, pupils from the first school may be expected to drastically improve in reading upon exposure to reading programs whereas pupils in the second school may not even though procedures in the second school may be superior to those used in the first school. In addition, factors such as parental involvement, persistence of pupils coming from a particular tribe, academic competitiveness of a particular tribe, etc., are unknown factors in this study which may account for observed differences between schools.

Table 42

A Comparison of Pre-Post California Achievement Test Total Reading Grade Equivalent Scores at Theodore Roosevelt Boarding School, Keams Canyon Boarding School (& day), and Hotevilla Day School for Grade 4 using 1963 Norms

School	N*	Pre Test	Post Test	Gain
Theodore Roosevelt Brdg.	5	2.38	3.06	+.68
Keams Canyon Brdg. & Day	16	3.64	4.12	+.48
Hotevilla Day School	9	2.98	3.51	+.53

N* - Number of Students Tested

The results reported in Table 42 show that pupils in Theodore Roosevelt Boarding School gained .68 grades in reading whereas pupils as Hotevilla only gained .53 grades and at Keams Canyon, .48 grades. One explanation for this is that there was an 6-month lapse of time between pre-post tests at Keams Canyon and Hotevilla, in addition, pupils at Theodore Roosevelt Boarding School began the school years reading .60 grade levels below pupils at Hotevilla and 1.26 grade levels below pupils at Keams Canyon. It thus might have taken less training to raise the reading scores of pupils at Theodore Roosevelt. It is somewhat disappointing that pupils in any of the three schools did not gain one month reading for one month of training. However, since this is the first year of the reading projects, there is no expected rate of increase with which to compare these results. Thus all three gain scores may or may not represent vast improvement in reading over what would have occured without the projects.

Table 43

A Comparison of Pre-Post California Achievement Test Total Reading Grade Equivalent Scores Between Theodore Roosevelt Boarding School and Keams Canyon Boarding Day School for Grades 5 - 8 Using 1963 Norms

School	Grade	N*	Test	Test	Gain
Theodore Roosevelt Boarding	5	7	3.04	4.00	+ .96
Keams Canyon Boarding & Day	5	25	3.68	4.97	+1.29
Theodore Roosevelt Boarding	6	9	3.78	4.76	+ .98
Keams Canyon Boarding & Day	6	16	4.88	5.38	+ .50
Theodore Roosevelt Boarding	7	21	4.08	5.05	+ .97
Keams Canyon Boarding & Day	7	27	4.03	5.68	+1.66
Theodore Roosevelt Boarding	8	27	4.97	5.66	+ .69
Keams Canyon Boarding & Day	8	20	4.26	5.79	+1.52

N* - Number of Students Tested

These results show that pupils at Theodore Roosevelt Boarding School had higher gains in reading than Keams Canyon Boarding School in grade 6 but Keams Canyon pupils had much higher gains in grades 5, 7, and 8. In fact in grade 8, pupils at Keams Canyon had gain scores more than double those at Theodore Roosevelt in spite of the fact that only six months time elapsed between pre-post tests at Theodore Roosevelt Boarding School. Thus the program at Keams Canyon produced results superior to the program used at Theodore Roosevelt. However both programs produced gain scores of one or more months improvement in reading for every month the pupils were in school except for the 8th grade pupils at Theodore Roosevelt who gained only .69 months in the 8 month program.

Table 44

A Comparison of Pre-Post California Achievement Test Total Reading Grade Equivalent Scores Between Salt River and Polacca at Grade Three

School	N*	Pre Test	Post Test	Gain
Salt River Day School	11	1.74	2.00	+ .26
Polacca Day School	14	2.49	3.49	+1.00

N* - Number of Students Tested

The results reported in Table 44 show that pupils at Polacca gained almost four times the reading performance of pupils at Salt River. However, the pre-test was administered at Polacca in April 1971 which gave the pupils 12 months to improve their reading whereas pupils attending Salt River only had 8 month to improve their reading. This does not negate the fact that pupils attending Polacca improved their reading one month for every month between pre and post tests whereas pupils attending Salt River improved their reading by only .3 months for each month in school. Since both schools had similar types of programs, the observed differences must be due to other factors.

Table 45

Pre-Post California Achievement Test Total Reading Test
Grade Equivalent Scores for Salt River, Polacca,
Hopi Day, and Second Mesa Day Schools at the
4th, 5th, & 6th grades Using 1963 Norms

School	Grade	N*	Pre Test	Post Test	Gain
Salt River Day School	4	12	2.49	2.65	+ .16
Polacca Day School	4	22	3.47	4.10	+ .63
Hopi Day School	4	5	3.10	3.76	+ .66
Second Mesa Day School	4	16	3.06	3.73	+ .67
Salt River Day School	5	12	3.01	3.22	+ .21
Polacca Day School	5	27	4.04	4.66	+ .53
Hopi Day School	5	4	4.38	4.45	+ .07
Second Mesa Day School	5	12	3.91	4.82	+ .91
Salt River Day School	6	12	3.86	4.61	+ .75
Polacca Day School	6	13	5.00	5.63	+ .63
Hopi Day School	6	5	4.74	5.34	+ .60
Second Mesa Day School	6	16	4.49	5.49	+ 1.00

N* - Number of Students Tested

These results show that at every grade level Second Mesa pupils had higher gains in reading than did Salt River, Polacca, and Hopi Day pupils. In fact in the 5th and 6th grades these differences in rate of change between Second Mesa and the other schools were statistically significant. In grade 4 Salt River pupils increased their reading scores an average of only .16 grades and in grade 5 only .21 grades and in both grades Salt River pupils had change scores that were statistically lower than both Polacca and Second Mesa. In addition, grade 5 pupils at Hopi Day had significantly lower increases (+.07 grades) than did pupils at all three of the other school. Everything else equal, pupils attending Polacca should have increased in reading more than pupils at the other schools since the pre-post testing was done 12 months apart whereas it was only 8

months at Salt River and Second Mesa Day and only 7 months at Hopi Day School. The monthly average increase in reading equalled or exceeded one month only in grades 5 and 6 at Second Mesa.

Table 46

Pre-Post California Achievement Test Total Reading Grade Equivalent Scores for Casa Blanca, St. Johns, and Gila Crossing Schools in Grades 2 and 3 Using 1963 Norms

School	Grade	N*	Test	Test	Gain
Casa Blanca Day School	2	8	1.20	1.56	+ .36
St. Johns Elementary School	2	7	1.61	2.57	+ .96
Gila Crossing Day School	2	14	1.44	2.08	+ .64
Casa Blanca Day School	3	4	2.27	2.87	+ .58
St. Johns Elementary School	3	8	2.25	3.55	+1.30
Gila Crossing Day School	3	4	2.52	2.90	+ .38

N* - Number of Students Tested

An examination of Table 46 shows that pupils attending St. Johns had significantly higher increases in reading performance in both the 2nd and 3rd grades than did pupils at Casa Blanca and Gila Crossing. St. Johns pupils had one more month to learn reading between pre-post tests however that one month should not have made as much difference as the present results show. For example, the average monthly increase in reading in the second grade at St. Johns was 1.2 months whereas it was only .45 months at Casa Blanca and .8 months at Gila Crossing.

Table 47

Pre-Post California Achievement Test Reading Grade Equivalent Scores for Casa Blanca and St. Johns in Grade 4 Using 1963 Norms

School	N*	Pre Test	Post Test	Gain
Casa Blanca Day School	12	2.61	3.82	+1.22
St. Johns Elementary School	10	3.47	4.37	+ .90

N* - Number of Students Tested

An examination of Table 47 shows that pupils attending Casa Blanca and St. Johns increased their reading scores one or more months for each month they were in school. In addition, the average gain score at Casa Blanca was .32 months greater than that at St. Johns in spite of the fact that pupils had one month less to learn between pre-post tests at Casa Blanca.

Table 48

Pre-Post California Achievement Test Total Reading Grade Equivalent Scores for Second Grade Pupils Attending Santa Rosa Boarding/Day School, Kerwo Day School, and Vaya Chin Using 1970 Norms

School	N*	Pre Test	Post Test	Gain
Santa Rosa Boarding & Day	21	2.44	2.36	- .08
Kerwo Day School	9	1.82	2.27	+ .45
Vaya Chin Day School	10	1.65	1.40	- .25

N* - Number of Students Tested

The results show that pupils at Santa Rosa Boarding School decreased their average reading scores .08 months and pupils at Vaya Chin decreased their reading scores one-fourth grade level and appear at first glance to be disappointing. However since this is the first year comparison of Title I projects have been made in the Phoenix Area, there is no base rate against which to compare these results. Certainly it would be better to see 2nd grade pupils increase their reading scores at those two schools, but the decrease may not be as negative as they appear.* Even so, Kerwo pupils scored significantly higher gain scores than pupils at the other two schools.

* In addition, the pre-test scores reported at Santa Rosa Boarding School are well above grade level and validity of these pre-test results is highly questionable.

S C I E N C E C O M P O N E N T S

Chapter IV-C

PHOENIX INDIAN HIGH SCHOOL

Science Curriculum Improvement Study (IMPACT)

I. Vital Statistics

A. School Name and Address:	Phoenix Indian High School P.O. Box 7188 Phoenix, Arizona 85011
B. Component Cost:	$32,655.00
C. Staffing Pattern:	Professional - One Science Teacher (Title I) Paraprofessional - One Teacher Aide (Title I)
D. Number of Student Participants:	60
E. Contact Person:	Miles Bolinger, Principal
F. Operational Period:	January to May
G. Years in Operation:	One

II. Component Objectives

Sixty (60) students in grades 7-9 will improve their ability to function in the classroom by increasing their individual total grade placement score one year or more as measured by the Metropolitan Achievement Test and will increase their scientific literacy as measured by specific evaluation tools designed by Dr. Fred Staley, Arizona State University.

III. Evaluation

Pre-Mid-Post Metropolitan Achievement Test (Science Battery)

IV. Procedures

The Life Science sequences Environments, Communities, and Ecosystems of the Science Curriculum Improvement Study Program were used to

provide the desired learning experiences to enable students to learn the fundamental concepts of the biological sciences related to their own environment.

Table 49

California Achievement Test - Advance, Form G,
Phoenix Indian High School

Test Periods	GRADE LEVEL							
	7		8		9		7-9	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (1/5/72)	3	4.73	9	3.91	53	4.40	65	4.35
Post-Test (5/22/72)	1	4.60	4	4.20	38	4.98	43	4.90
Amount of Gain or Loss (+ or -)		- .13		+ .29		+ .58		+ .55

N* Number of Students Tested
Mean* - Mean Grade Equivalent Score

V. Discussion

The Metropolitan Achievement Test results for grades 7-9 are summarized in Table 49. These results show increases in achievement of .29 .58, and .55 years respectively for grades 8, 9, and the combination of grades 7 through 9, and a decrease of .13 years for pupils in grade 7. However these results are somewhat misleading when studied in detail as the results do not show the same pupils on the pre and post tests. Thus, when looking at the results one must be careful not to interpret the reported results as being an accurate reflection of the program.

MATHEMATICS COMPONENTS

Chapter IV-D

S T E W A R T I N D I A N H I G H S C H O O L

Basic Mathematics Skills

I. Vital Statistics

A.	School Name and Address:	Stewart Indian High School Nevada Agency Stewart, Nevada 89437
B.	Component Cost:	
C.	Staffing Pattern:	Professional - One Math Teacher (Title I) Eleven Trades-Technical and Home Economics Staff Members (Title I) (Intermittent) Paraprofessional - One Teacher Aide (Title I)
D.	Number of Student Participants:	60
E.	Contact Person:	William C. Whipple
F.	Operational Period:	November to May
G.	Years in Operation:	One

II. Component Objectives

To increase mathematics skills as measured by the California Achievement Test - Math sub-tests for students as follows:

15 Ninth Grade Students	3.0 Years
15 Tenth Grade Students	2.5 Years
15 Eleventh Grade Students	2.0 Years
15 Twelfth Grade Students	1.5 Years

III. Evaluation

Pre-Mid-Post California Achievement Test - Mathematics Sub-tests

IV. Procedures

Utilizing individualized instructional materials, a mathematics teacher and aide taught basic mathematics concepts and skills. Practical application of mathematics skills was emphasized one hour per week through the involvement of the Trades-Technical and Home Economics Departments. The students were involved one hour per day, five days per week.

Table 50

California Achievement Test - Form W, 1970 Norms,
Stewart Indian High School

Test Periods	GRADE LEVEL							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (11/29/71)	9	5.5	5	5.3	1	5.0	1	5.0
Post-Test (5/22/72)	6	6.6	5	5.9	1	6.4	1	6.8
Amount of Gain or Loss (+ or -)		+1.1		+0.6		+1.4		+1.8

N* = Number of Students Tested

V. Discussion

The pre-post California Achievement Test - Mathematics scores for grades 9 to 12 at Stewart Indian High School are reported in Table 50. It should be noted that the pre-test was not administered until November 29, 1971 because the project was late in beginning. The results summarized in Table 50 show there was a marked improvement in mathematics performance in grade 9 (+1.1years), grade 11 (+1.4 years) and grade 12 (+1.8 years) but only moderate improvement in

grade 10 (+.6 years). However, the gain in grade 9 may be somewhat misleading as three pupils who were given the pre-test were not given the post-test. Thus the actual improvement of the six pupils who were post-tested may be more or less than the 1.1 years reported. In addition, it should be pointed out that the results for grades 11 and 12 are based upon the performance of only one pupil per grade.

SPECIAL EDUCATION COMPONENTS

Chapter IV-E

PHOENIX INDIAN HIGH SCHOOL

Special Learning Disability Program

I. Vital Statistics

A. School Name and Address:	Phoenix Indian High School P.O. Box 7188 Phoenix, Arizona 85011
B. Component Cost:	$10,324.00
C. Staffing Pattern:	Professional - Two Special Education Teachers (one 1740 and one Title I) Two Home Economics Teachers (Part-time) (1740)
D. Number of Student Participants:	60
E. Contact Person:	Miles Bolinger, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

Sixty (60) students, grades 7 to 11, will increase their total grade placement by one year or more as measured by the California Achievement Test - Total Grade Placement.

III. Evaluation

Pre-Mid-Post California Achievement Test

IV. Procedures

A special education teacher provided individualized instruction to students suspected of being emotionally disturbed, learning disabled, and/or borderline mentally retarded.

Two home economics teachers provided instruction concerning basic home making skills, personal hygiene and appropriate health habits.

The full complement of 60 students were not in the Special Education Program because the regular 1740 teacher took maternity leave and then resigned from government service. Because of the freeze on positions we were unable to replace her with another teacher. We also had a similar situation in the Home Economics Department which was to supplement this program. Two teachers retired in this department and the remaining teachers had to teach full-time in the regular program.

Table 51

California Achievement Test - Total Battery, 1963 Edition*
Phoenix Indian High School

Test Periods	GRADE LEVEL									
	8		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	0		9	4.9	8	5.1	4	4.2	1	4.2
Post-Test	1	4.3	8	5.3	10	6.9	6	6.9	1	6.7
Amount of Gain or Loss (+ or -)				+ 0.4		+ 1.8		+ 2.7		+ 2.5

N* = Number of Students Tested

* = Grade placement scores - 8th and 9th used Junior High Level; 10th, 11th, and 12th used advanced level

V. Discussion

The pre-post California Achievement Test - Total Battery scores for grades 9 to 12 at Phoenix Indian High School are summarized in Table 51. An examination of Table 52 shows that pupils in grade 10 increased their total grade placement by 1.8 years, pupils in grade 11 increased theirs by 2.7 years, and the one pupil in grade 12 increased his grade placement by 2.5 years. However, since the grades 10 and 11 more pupils were given the post-test than were given the pre-test the true gains in grade placement may be more or less than the present results indicate. Thus, while the objective of increasing the pupils grade placement by one or more years was met in all three grades, the results for grades 10 and 11 should be interpreted with caution. Pupils in grade 9 increased their total achievement scores an average of .4 years.

SUMMARY

Cognitive Domain Projects

Projects in the cognitive domain had as their objectives improved reading and communication skills, improved mathematics skills, improved science, and special education opportunities. Procedures selected for reaching stated goals varied greatly and included such things as special purpose instrumentation, individualized teaching techniques, and specialized personnel.

A total of $812,737 was expended for projects in the cognitive domain. By far the largest concentration of funds, ($750,720) was in reading projects followed by science projects ($32,655), math projects ($19,038), and special education ($10,324).

In reading there were 34 professional and 50 paraprofessional staff serving 1,718 students. Special education had 1 professional serving 60 students, math and science both had 1 professional and 1 paraprofessional serving 60 students.

An examination of the data pertaining to the reading projects shows that there are no clear-cut conclusions that can be made. Whereas one

school had gains in reading that were higher than the gains reported in another school at one grade level, the trend was often reversed in the next grade level.

Thus more attention needs to be given to evaluating the projects in greater detail so that valid interpretations can be made.

AFFECTIVE DOMAIN COMPONENTS

C H A P T E R V

The affective domain is that realm of behavior which relates to an individuals' feelings, emotions, values, personality and their collective impact upon his individual, social, and academic development. These conditions are characterized by such affective reactions as frustration, deprivation, and gratification. A special condition is the lack of goal clarity generally characterized by various states of anxiety. These behavioral states in turn relate to motives like aggression, affiliation, avoidance, and so forth. As these aspects interact with various situational and personality characteristics, they combine to determine overt behavior. Thus, projects in the affective domain had as primary objectives the improvement of attitudes and/or the reduction of dysfunction kinds of behavior. These objectives fall into three categories: (1) self image improvement, (2) vocational awareness, and (3) dropout prevention and reduction of dysfunctional behavior.

Table 52

Amounts Funded in FY 1972 Title I Affective Domain Components by Agency or School

School/Agency	Affective Domain Components			Totals
	Self Image	Vocational Guidnc	Dropout Prevent'n	
Elementary Schools				
Cibecue Day School				
Theodore Roosevelt	27,450			27,450
John F. Kennedy Day				
Hopi Day School				
Hotevilla Day School				
Keams Canyon Brdg/Day				
Moencopi Day School				
Polacca Day School	6,515			6,515
Second Mesa Day Schl				
Papago Agency Schools				
Pima Agency Schools				
Salt River Day School	8,862			8,862
Supai Day School				
High Schools				
Phoenix Indian High			149,548*	149,548
Sherman Indian High		11,000	45,519	56,519
Stewart Indian High	48,000	18,606		66,606
TOTALS	90,827	29,606	195,067	315,500

Table 53

Numbers of Students Participating in FY 1972 Title I Affective Domain Components by Agency or School

Agency - School	Affective Domain Components			Totals
	Self Image	Vocational Gudnce	Dropout Prevent'n	
Elementary Schools				
Cibecue Day School				
Theodore Roosevelt	133			133
John F. Kennedy Day				
Hopi Day School				
Hotevilla Day School				
Keams Canyon Brdg/Day				
Moencopi Day School				
Polacca Day School	30			30
Second Mesa Day Schl				
Papago Agency Schools				
Pima Agency Schools				
Salt River Day School	66			66
Supai Day School				
High Schools				
Phoenix Indian High			440	440
Sherman Indian High		120	150	270
Stewart Indian High	60	50		110
TOTALS	289	170	590	1,049

Table 54

Number of Professional and Paraprofessional Staff Positions Funded by FY 1972 Title I Affective Domain Components by Agency or School

Agency/School	Affective Domain Components						Totals		
	Self Image		Vocational Guidance		Dropout Prevention				
	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools									
Cibecue Day School									
Theodore Roosevelt		1						1	1
John F. Kennedy Day									
Hopi Day School									
Hotevilla Day Schl									
Keams Canyon Brdg									
Moencopi Day Schl									
Polacca Day School		1						1	1
Second Mesa Day									
Papago Agcy Schools									
Pima Agency Schools									
Salt River Day Schl	1						1		1
Supai Day School									
High Schools									
Phoenix Indian High					7	6	7	6	13
Sherman Indian High						4		4	4
Stewart Indian High	3	4	1	1			4	5	9
TOTALS	4	6	1	1	7	10	12	17	29
COMPONENT TOTALS	10		2		17		29		

P = Professional

Pp = Paraprofessional

Table 55

Number of Regular Program Employees Working in FY 72
Title I Affective Domain Components
by Agency or School

Agency/School	Affective Domain Components						Totals		
	Self Image		Vocational Guidance		Dropout Prevention				
	P	Pp	P	Pp	P	Pp	P	Pp	All
Elementary Schools									
Cibecue Day School									
Theodore Roosevelt	1						1		1
John F. Kennedy									
Hopi Day School									
Hotevilla Day									
Keams Canyon Brdg									
Moencopi Day									
Polacca Day School									
Second Mesa Day									
Papago Agcy Schools									
Pima Agency Schools									
Salt River Day Schl									
Supai Day School									
High Schools									
Phoenix Indian High						6		6	6
Sherman Indian High					10	1	10	1	11
Stewart Indian High	7						7		7
TOTALS	8	0	0	0	10	7	18	7	25
COMPONENT TOTALS	8		0		17		25		

P = Professional

Pp = Paraprofessional

S H E R M A N I N D I A N H I G H S C H O O L

Apartment Living and Work Experience Program

I. Vital Statistics

A. Name and Address of School	Sherman Indian High School 9010 Magnolia Avenue Riverside, California 92503
B. Component Cost:	$11,000.00
C. Staffing Pattern:	Professional - One Home Economics Department Head (1740) One Teacher (1740) Paraprofessional - One Aide, Teacher
D. Number of Student Participants:	120
E. Contact Person:	Michael Ragsdale
F. Operational Period:	
G. Years in Operation:	Two

II. Component Objectives

One hundred twenty (120) senior students will demonstrate an 85 to 90% increase in knowledge and information about vocational opportunities as measured by the Vocational Guidance Inventory.

One hundred twenty (120) senior students will demonstrate those skills necessary for effectively functioning in an environment outside the boarding school as measured by their ability to handle their experiences in the apartment living situation, i.e., budgeting their expenses, arriving at school on time, personal responsibilities in the up-keep of their apartment, etc.

III. Evaluation

Pre-Mid-Post Vocational Guidance Inventory

Pre-Mid-Post written reports from employees of work experiences education program

Pre-Post Urban Living Skills Questionaire

IV. Procedures

Students were involved in a two phase activity: (1) classroom preparation, and (2) apartment living.

The first phase lasted one hour per day each day for 15 weeks and consisted of instruction regarding: economic management, rules and regulations imposed on apartment dwellers, personal responsibilities and day-to-day living skills.

The second phase consisted of the students actually residing in an apartment for 3 weeks and managing a weekly allowance in order to meet all of their expenses. Three students were grouped for each three week experience.

Table 56

Apartment Living Inventory

Test Periods	N*	Mean
Pre-Test	62	1.45
Post-Test	62	1.60

N* = Number of Students Tested

V. Discussion

The pre-post Apartment Living Inventory for senior pupils attending Sherman Indian High School are presented in Table 56. The inventory consists of 30 items which measures a person's confidence about various aspects of apartment living. The higher the reported results the more confident one feels about apartment living. The highest possible score is 2 which shows complete confidence in one's ability to cope with apartment living, a one means the person is not confident and a zero means the person is uncertain whether he feels confident or not. Thus the results reported in Table 56 show an increase of .15 on the post-test which means the pupils were more confident of their abilities at the end of the school year.

S E L F - I M A G E

THEODORE ROOSEVELT BOARDING SCHOOL

Self-Image Stimulus Through Home-Living Experiences

I. Vital Statistics

A. School Name and Address:	Theodore Roosevelt Boarding School P.O. Box 567 Fort Apache, Arizona 85926
B. Component Cost:	$27,450.00
C. Staffing Pattern:	Professional - One Home Economics Teacher (1740) Two Teachers (overtime) (1740) Paraprofessionals - One Teacher Aide (Title I)
D. Number of Student Participants:	133
E. Contact Person:	Glen Sorensen, Principal
F. Operational Period:	
G. Years in Operation:	One

II. Component Objectives

One hundred thirty-three (133) students will raise their scores to 2.5 on the FAATE Inventory.

III. Evaluation

Pre-Mid-Post FAATE Self Concept Inventory

IV. Procedures

Activity I

A home economist and teacher aide conducted instructional units in the following areas: General Housekeeping, Grooming and Hygiene, Ettiquette, Sewing, Clothing, Nutrition, Meal Planning, Food Preparation and Serving, Consumer Economics, Child Care, Home Decorating for

Special Occasions. Guest speakers from the Indian community and the surrounding community were solicited for classroom presentations.

The classes were held daily for 1½ hours per day with approximately 14 students in each class.

Table 57

California Achievement Test
Total Battery

Test Periods	GRADE LEVEL 7th		8th	
	# Students	Mean	# Students	Mean
Pre-Test (Sept. 1971)	25	5.3	19	5.5
Post-Test (May 1972)	35	6.0	21	7.0
Amount of Gain or Loss (+ -)		+ .7		+ 1.5

Mean = Mean grade equivalent score

Table 58

FAATE Inventory

Test Periods	GRADE LEVEL 7th		8th	
	# Students	Mean	# Students	Mean
Pre-Test (Sept. 1971)	25	9.9	23	9.7
Post-Test (January '72)	23	10.1	19	9.6
Amount of Gain or Loss (+ -)		+ .2		- .1

N* = Number of Students Tested

All four sheets totaled before was selected.

V. Discussion

The pre-mid FAATE Test results for grades 7 and 8 at Theodore Roosevelt Boarding School are reported in Table 58. No post-test was administered because tests were not readily available.

A note of explanation is necessary regarding the FAATE Inventory. FAATE stands for Factors Affecting Attitudes Toward Education. The FAATE is a Likert Scale which evaluates an individual's perception relative to five criteria: (1) self concept; (2) attitude toward teachers; (3) value of education; (4) home attitude toward school; and (5) recreation. For each criterion it was possible to quantify a student's feeling within a numerical range of 1-7. One (1) was construed to be the most positive response, and seven (7)was the most negative. That is as the values move toward one (1) the attitude being measured is thought to be more positive. Conversely, as a value moves toward seven (7) the attitude is thought to be more negative. For example, 1.3 indicates a more positive attitude toward any of the aforementioned criteria than does a 2.7 value. In terms of a pre-post comparison, a pre-score value of 3.1 and a post-score value of 3.9 would suggest that a subject's attitude had become more negative. The specific value obtained for a student is a mean score computed from 12 to 17 responses for each of the five factors. This explanation of the FAATE Inventory will apply to many of the affective domain projects unless otherwise noted. As may be noted in the explanation below, a mid or post-test value which is lower than the pre-test mean indicates that a positive attitudinal change has taken place.

As the results in Table 58 show, tests results were reported only for an overall score on the test with the separate factors ignored. Thus several mutually exclusive raw scores defining different perceptions were added together which means the scores represent a diffuse attitude. The results are therefore uninterpretable.

In addition, the California Achievement Test total battery was administered on a pre-post basis to the target pupils to evaluate the sub-objectives of the affective component. These results are presented in Table 57 and they show that grade 7 pupils gained .7 years and grade 8 pupils gained 1.5 years. Theodore Roosevelt Boarding School had a reading program and some pupils may have been in both components. Thus these results may reflect growth that is due in part to the reading component.

P O L A C C A D A Y S C H O O L

Improving Self Image Through
Native Arts

I. Vital Statistics

A. School Name and Address:	Polacca Day School Hopi Agency Polacca, Arizona 86040
B. Component Cost:	$6,515.00
C. Staffing Pattern:	Paraprofessionals - One Teacher Aide (Title I) 15 Artisans (Title I)
D. Number of Student Participants:	30
E. Contact Person:	Fritz Poocha, Principal
F. Operational Period:	
G. Years in Operation:	

II. Component Objectives

Thirty (30) students, grades 3 to 6, will raise their self image score on the FAATE Inventory to 2.5.

III. Evaluation

Pre-Mid-Post FAATE Inventory

IV. Procedures

Activity I

Groups of six children worked one hour daily with an aide and/or native artisan in a Hopi culture oriented program of arts, crafts and music. Each native artisan provided instruction each day for ten consecutive days.

Activity II - Art Van

The Art Van staff provided services four days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 59

F.A.A.T.E. Inventory - Self
Concept Scores

Test Period	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	54.8	7	69.7	6	70.3	8	64.8	13	62.8	8	62.5
Post-Test	8	17.0	7	8.6	6	10.0	8	26.3	13	36.5	8	37.5
Amt of Gain or Loss		-37.8		-61.1		-60.3		-38.5		-26.3		-25.0

N* = Number of Students Tested

Mean = Mean Percentile

V. Discussion

The results of the FAATE Inventory, self-concept scale, for grades 1-6 at Polacca Day School are summarized in Table 59. It is important to point out that the scoring system for the FAATE was somewhat different than in other projects. The scores reported are percentages of items in the self-concept scale that the students responded to in a negative manner. For example, there were 17 items in the scale and in grade one on the pre-test the eight pupils responded to an average of 54.8% of these 17 items in a negative manner. An examination of these results shows that the negative responses decreased a minimum of 25 percent (grade 6) to a maximum 61.1% (grade 2). Thus in every grade pupils self concepts became more positive as measured by the FAATE.

S A L T R I V E R D A Y S C H O O L

Counseling and Guidance

I. Vital Statistics

A. School Name and Address:	Salt River Day School Route 1, Box 117 Scottsdale, Arizona 85256
B. Component Cost:	$8,868.00
C. Staffing Pattern:	Professional - One Counselor (Title I)
D. Number of Student Participants:	66
E. Contact Person:	Principal
F. Operational Period:	September to May
G. Years in Operation:	Two

II. Component Objectives

Sixty-six (66) students, grades 1 to 6, will increase their self image scores on the FAATE Inventory to 2.5.

Sixty-six (66) students, grades 1 to 6, will increase their California Achievement Test scores by 1.0 years.

III. Evaluation

Pre-Mid-Post FAATE Inventory

Pre-Mid-Post California Achievement Test

IV. Procedures

Students received intensive and individualized counseling and guidance services conducted by a guidance counselor. Each student spent at least one 20-minute session each week with the counselor in a group or individual session.

The counselor was responsible for being a liaison between school and involved community members.

Table 60

California Achievement Test
Total Battery ('63 Norms)

Test Periods	GRADE LEVEL											
	1		2		3		4		5		6	
	N	M	N	M	N	M	N	M	N	M	N	M
Pre-Test (9/18/71)	14	.2	10	1.0	12	1.9	11	2.3	13	2.9	10	3.0
Post-Test (5/15/72)	14	1.1	10	1.6	12	2.7	11	3.1	13	3.2	10	4.7*
	—	—	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		+.9		+.6		+.8		+.8		+.3		+1.7*

N = Number of Students Tested
M = Mean grade equivalent score
* = Validity questionable

Table 61

FAATE Inventory

Test Periods	GRADE LEVEL							
	3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (Nov. 2, 1971)	12	2.13	11	2.02	9	2.12	11	1.81
Post-Test (May 15, 1972)	12	2.77	11	3.03	9	2.20	11	2.74
	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		+.64		+1.01		+.08		+ .93

N* = Number of Students Tested
Mean = Mean grade equivalent score

V. Discussion

The pre-post FAATE Test results for grades 3 to 6 at Salt River Day School are summarized in Table 61. It should be noted that the self image scores are the only ones reported. Since an increase in score from pre to post test denotes a move toward a more negative attitude, and since all average grade level scores increased, this means the pupils had a more negative self image at the completion of the program than when they began.

The California Achievement Test - Total Battery results were summarized in Table 60. These results show gains of about .8 to .9 years for grades 1, 3, and 4, gains of .6 years for pupils in grade 5, and marked gains for pupils in grade 6 of 1.7 years.

STEWART INDIAN HIGH SCHOOL

Environmental Enrichment to Increase Self-Concept

I. Vital Statistics

A. School Name and Address:	Stewart Indian High School Nevada Agency Stewart, Nevada 89437
B. Component Cost:	$48,000.00
C. Staffing Pattern:	Professional 1 Project Coordinator (Title I) 1 Counselor/Student Activities Specialist (Title I) 1 Project/Student Enterprise Manager (Title I) Paraprofessional 4 Aides (Title I) 40 Native Artists (part-time)
D. Number of Student Participants:	60
E. Contact Person:	William C. Whipple
F. Operational Period:	January to May
G. Years in Operation:	One

II. Component Objectives

To reduce by ½ the number of students exhibiting negative self concepts and emotional instability as measured by selected personality tests and by a reduction in self-destructive acts, persistent depression, and carelessness in personal habits.

To increase positive attitudes of students toward their school, its facilities and their relationship to it as measured by a reduction in instances of destructive behavior, an increase in involvement

in school activities and an increase of 1.5 years in achievement as measured by the California Achievement Test.

III. Evaluation

Pre-Mid-Post Benton-Flores, Self Concept Inventory

Pre-Mid-Post Frequency of Reported Self-Destructive Acts

Pre-Mid-Post Frequency of Observed Instances of Continuing Depression

Pre-Mid-Post California Achievement Test

IV. Procedures

This activity consisted of a 3-phase operation:

Phase I - Needs Assessment

Phase II - Planning

Phase III - Initiation of Services

All services resultant from Phases I & II were geared toward the creation of experiences conducive to positive growth.

These experiences included: (1) Dormitory Beautification, (2) Civic Improvements, (3) Student Profit-Making Enterprises, (4) Cosmotology, (5) Recreation, (6) Arts and Crafts, (7) Ecology, and (8) Health and Hygiene, etc.

Table 62

Comparison between Pre and Post Test Mean Scores on the FAATE. Semantic Differential Administered in January and May 1972 to Male and Female Students in Grades Pre-High Through Twelfth

Test Periods	FAATE - Semantic Differential Factor Scales									
	Self Concept		Value of Education		Home Attitude Toward School		Attitude Toward Teachers		Attitude Toward Recreation	
	N*	Pre	N*	Pre	N*	Pre	N*	Pre	N*	Pre
Pre-Test (January 1972)*		3.5		2.9		2.5		3.0		3.1
Post-Test (May 1972)**		2.9		2.6		2.8		2.8		2.9
Amount of Gain or Loss *** (+ or -)		+0.6		-0.3		-0.3		+0.2		+0.2

N* = Number of Students Tested

* = 58 students responding

** = 57 students responding

*** = These results are presented as an increase or decrease in positive attitude not as an increase or decrease in score value

The data presented in Table 62 presents pre and post test mean scores of target students on the semantic differential scale of the FAATE. (Only the semantic differential scale was utilized in this project). From the data presented it is possible to see that some measured improvement in attitude occurred during the project period. The largest gain is in Self Concept with smaller improvements in the categories Value of Education, Attitude Toward Teachers, and Attitude Toward Recreation. The only loss is in Home Attitude Toward School. The overall gains represented by the test data, especially in the area of Self Concept, would seem to indicate some positive growth associated with the project period.

Table 63

Comparison Between Pre and Post Test Grade Equivalent Scores on the Metropolitan Achievement Test Administered in September 1971 and April 1972 to Male and Female Students in the Pre-High Grade

Test Periods	Metropolitan Achievement Test							
	Reading		Math		Science		Social Studies	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)*		5.54		4.38		4.28		4.98
Post-Test (May 1972) *		6.72		5.08		5.42		6.70
Amount of Gain or Loss (+ or -)		+.98		+.70		+1.14		+1.72

N* = Number of Students Tested

* = 5 Students responding

The data presented in Table 63 represents the pre-post mean grade equivalent scores for target students in the pre-high grade. Although the sample is small (n=5), it is important to note that significant growth was made in each subject area tested, from .7 to 1.72 grade equivalent years on the average in all subject areas.

Table 64

Comparison Between Pre and Post Test Percentile Scores on Metropolitan Achievement Test Administered in September 1971 and April 1972 to Male and Female Students in Grades Nine Through Twelve

Test Periods	Metropolitan Achievement Test															
	READING								MATH							
	9		10		11		12		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)		43.5		44.6		34.0				41.6		40.0				45.7
Post-Test (April 1972)		37.8		55.0		36.8				41.0		41.7				36.9
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		-5.7		+10.4		+2.8				-0.6		+1.7				-8.8

N* = Number of Students Tested

The data presented in Table 64 represents academic growth for target students in grades nine through twelve. Since grade equivalent scores for these grade levels were not available percentile scores based on local norms were used instead. The results are obviously mixed showing some positive changes but also some losses in tested levels of achievements.

Students in grade nine showed a decline in percentile ranking in relation to peers on local norms of 5.7 percentiles in reading and .6 percentiles in math. Students in grade ten showed the most positive gains in terms of percentile ranking with local norms, advancing 10.4 percentiles in reading and 1.7 in math. Students in grades 11 and twelve showed a gain of 2.8 in reading but a significant loss of 8.8 in math.

With the exception of target students in grade 8 it is difficult to establish any definitive grade equivalent growth or loss for target students. It would appear that the most positive results occurred with students in grade 10. Other project records indicate that students in this grade were the most involved with project activities; however, any conclusions regarding academic growth and the project would seen rather tenuous given the above results.

Table 65

Comparison of Incidents of Dysfunctional Behavior Among the Target Group Students Before (August to December 1971) and During (January to May 1972) Project Activities

Reporting Period	Number of Students	Number of Infractions
August to December	62	41
January to May	62	26
Difference		-15

Table 65 represents the tally of incidents of dysfunctional behavior reported by boys and girls guidance departments before and during the project. Reports were made on all target students and alternates before the project (the period from August to December) and during project activities (January to May). As Table 4 indicates incidents of dysfunctional behavior for target students decreased by approximately 1/3 during the project as compared with the period before the project began.

BEHAVIOR PROBLEMS

AND DROP-OUT PREVENTION

SHERMAN INDIAN HIGH SCHOOL

Behavioral Problems and Drop-Out Rate

I. Vital Statistics

A. School Name and Address:	Sherman Indian High School 9010 Magnolia Avenue Riverside, California 92503
B. Component Cost:	$45,519.00
C. Staffing Pattern:	Professional - One Program Director (1740 One Recreation Specialist (½ time) (1740) One Recreation Specialist (1/10 time) (1740) One Educational Psychologist (½ time) (1740) One Fine Arts Specialist (¼ Time) (1740) One Social Worker (1740) (1/10 Time) Two Teacher Supervisors (1/10 Time) (1740) Four Counselors (3/5 Time) (1740) One Counselor (¼ time) One Clinical Nurse (½ Time) (Public Health Service) Paraprofessionals - Four Recreation Aides (Title I)
D. Number of Student Participants:	150
E. Contact Person:	Michael Ragsdale
F. Operational Period:	September to May
G. Years in Operation:	Two

II. Component Objectives

One hundred fifty (150) students, grades 9-12, will decrease the incidents of behavioral problems involving drinking, fighting, etc.

by 30% as documented by daily pupil personnel reports in comparison with reports from two previous years.

One hundred fifty (150) students, grades 9-12, will reduce their drop-out rate by 30% as compared to statistics from the previous two years.

III. Evaluation

Comparison of daily pupil personnel reports and drop-out rate with reports from the two previous years.

IV. Procedures

Activity I

Students were involved in formal and informal group discussions, interest trips, recreation center activities and arts and crafts activities in the dormitory and arts and crafts center. The purpose of the activities was to offer students an avenue for school involvement. The students were encouraged to plan their activities and to assume responsibility for their organization and implementation.

Table 66

Comparison of the Number and Percent of Student Dropouts, Drinking, and Glue Sniffing Incidents in the 1969-70, 1970-71 and 1971-72 School Years for Students in Grades 9-12

School Year	Total Enrollment	DROPOUTS		Number & Student Ratio of Reported Incidents			
		Number	Percent of Total Enrollment	Drinking Incidents	Ratio Per Student	Glue Sniffing Incidents	Ratio Per Student
1969-70	611	162	26.5%	819	1.18	330	.54
1970-71	637	111	17.4%	518	.81	215	.34
1971-72	639	130	20.3%	478	.75	238	.37

V. Discussion

Table 66 presents a comparison of dropout rates and incidents of drinking and glue sniffing at Sherman Indian High School for 1969-70, 1970-71 and 1971-72. The results summarized in Table 66 show that the number of dropouts for 1971-72 is an increase from the number reportedin 1970-71. The percent of students dropping out in 1971-72 was 20.3% whereas it was only 17.4% in 1970-71. On the other hand, there is clearly a progressive decrease in the number of drinking incidents from 1969-70 to 1970-71 and to 1971-72 even though total school enrollment increased over the three year period. The number of glue incidents shows an increase from the number reported in 1970-71 of 23 incidents but the increase was not enough to reach the high incidence rate reported in 1969-70.

PHOENIX INDIAN HIGH SCHOOL

Adjustment Through Guidance and A Culturalized
Arts and Crafts Program

I. Vital Statistics

A. School Name and Address:	Phoenix Indian High School P.O. Box 7188 Phoenix, Arizona 85011
B. Component Cost:	$149,548.00*
C. Staffing Pattern:	Professional - Six Counselors (Title I) One Art Teacher (Title I) Paraprofessional - Six Teacher Aides (Title I) Six Dormitory Aides (1740)
D. Number of Student Participants:	440
E. Contact Person:	Miles Bolinger, Principal
F. Operational Period:	
G. Years in Operation:	One

II. Component Objectives

Four hundred forty (440) students in grades 7-12 will decrease their incidents of behavioral problems involving drinking, fighting, sniffing, etc. by 30% as measured by pupil personnel reports and dormitory reports.

Four hundred forty (440) students in grades 7-12 will lower their drop-out rate by 30% as compared to the 1968-70 dropout rates. Four hundred forty students in grades 7-12 will increase their total grade placement two years or more as measured by the California Achievement Test.

III. Evaluation

Quarterly comparison of incidents of misbehavior utilizing daily and weekly pupil personnel data.

Quarterly comparison of dropout rates compared to data from two previous school years.

Pre-Mid-Post California Achievement Test - total grade placement

IV. Procedures

Activity I

One full time counselor was placed in each of six dorms to provide individual and group counseling activities. When possible counseling involved parents, guardian and/or tribal representatives.

Activity II

One art teacher and six teacher aides provided arts/crafts activities as a form of recreation in the dormitories.

Activity III - ZOOM

A commercial, highly structured package marketed by success Motivation Inc. was utilized for 44 of the target group students. The structure of this program presented the opportunity for the students in small group sessions to establish and pursue goals which were both desirable and meaningful within six basic realms. These areas were:

1. educational
2. social
3. physical
4. vocational
5. ethical
6. financial

Activity IV - Art Van

The Art Van staff worked with dormitory students in staff a total of ten days during the 1971-72 school year. Projects included: cloth banners, clay activities, leather works, decoupage, as well as decorations and designs appropriate for dormitory rooms.

Table 67

California Achievement Test - Total Battery
1963 Edition*, Phoenix Indian School

Test Periods	GRADE LEVEL											
	7		8		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 28, 1971)	3	6.4	8	6.3	21	6.9	25	7.4	45	8.2	41	8.8
Post-Test (March 7, 1972)	6	6.6	8	6.9	42	7.0	35	7.6	28	8.0	43	8.9
Amount of Gain or Loss (+ or -)	——	—— + .2	——	—— + .6	——	—— + .1	——	—— + .2	——	—— - .2	——	—— + .1

* = Grade Placement

N* = Number of Students Tested

Major Infractions of Title I Target Students at Phoenix Indian High School for school years 1970-71 and 1971-72.

School Year	Average Number of Major Infractions Per Student
1970-71	5.3
1971-72	4.5

A Comparison of Student-Body Dropout Rate at Phoenix Indian High School for school years 1968-1971 with Title I Target Student Dropout Rate for school year 1971-72.

Table 68

School Year	Dropout Rate for P.I.H.S. Students	
	Total Student Body	Title I Target Group
1968-69	18%	
1969-70	19%	
1970-71	21%	
1971-72		34%

Table 69

Major Infractions of Title I Target Students

Test Periods	Grades 7 - 12	
	N*	Mean
1970-71		5.3[a]
1971-72	468	4.5[b]
Amount of Gain or Loss (+ -)		- .8

N* = Number of Students Tested

a = Figure based on 20% random sample of 1971-72 target students who were in school at PIHS in 1970-71

b = Figure based on study of 468 student records

Drop-out Rate of all Students at Phoenix Indian High School for School Years 1969-70, 1970-71, and 1971-72.

School Year	Percent
1968-69	18%
1969-70	19%
1970-71	21%

Title I Target Group Students Dropout Rate for 1971-72: 34%

Phoenix Indian High School

Title I Project: ZOOM (Impact)
January 17, 1972

OBJECTIVES:

1. Demonstrate positive attitudes toward school by increased participation, attendance, and involvement.
2. To show an increase in personal motivation by increased achievement results in academic and non-academic activities.
3. Exhibit a stronger self-image and desire for accomplishment by eliminating negative behaviors.
4. Show evidence of increased achievement motivation through higher verbal scores on standardized tests.
5. Demonstrate a desire for success and future accomplishment by setting long-range and short-range goals.
6. Show evidence of breaking the "failure cycle" by desiring to graduate from high school and select a career.
7. Exhibit personal motivation and high self-concept through more careful grooming.

Table 70

Evaluation Method	Objectives	Results
J.I.M. Inventory	1	Mean pre-test scores, 100.0: Mean post-test score, 100.1: No significant difference.
California Achievement Test	2, 4	Mean gain for 42 students, 0.3 for the entire year. This was .17 less mean gain of school. No significant difference.
Observer Evaluation	7	No significant difference. Vocabulary of taped material seemed to be too difficult - students often did not understand material. Students would not accept peer group leadership. They did not cooperate with trained "keys" or the group leaders.
Personal Plan of Action Forms	5, 6	Students did not follow through in using these forms.
Participant Evaluations	6	Only received evaluation from 10-30 students. Six were positive, four were negative.

Continuation

Evaluation Method	Objectives	Results
School Infraction Reports		2.1 infractions per student for one semester. Slightly lower than other target group students. No significant difference.
Attendance Records	1, 3, 6	Attendance record poor. Eight unexcused absences per student per semester was the average for the four groups. Twelve of the 42 students dropped from school during the semester, 29%.

V. Discussion

Activity I

The pre-post California Achievement Test total battery test scores for grades 7-12 at Phoenix Indian High School are summarized in Table 67. An examination of Table 67 shows relatively small gains in grade placement for grade 7 (+.2 years), grade 9 (+.1 years), grade 10 (+.2 years), and grade 12 (+.1 years). The results for grade 11 are especially disappointing as the pupils lost .2 years of total grade placement. The best gain of +.6 years was found in pupils in grade 8.

Table 69 presents a summary of the major infractions committed by the target pupils at Phoenix Indian High School for the 1970-71 and 1971-72 school years. The reported results shows there was a 15% decrease in major infractions by the target pupils in 1971-72. Since the objective called for a reduction of infractions of 30%, the objective was not met, however this does not dampen the fact that a 15% reduction, from a practical standpoint, is significant.

A comparison of dropout rates of all pupils at Phoenix Indian High School for the 1968-69, 1969-70, and 1970-71 school years with the 1971-72 target pupils is presented in Table 68. An examination of Table 68 shows that the target pupils had a 13% higher dropout rate for 1971-72 than did all pupils in 1970-71. However it is unknown how large the dropout rate would have been in 1971-72 had the program not been in effect. The objective of reducing the target pupils dropout rate to 30% below the dropout rate of the prior years pupils was not met.

Activity II - Project ZOOM

Data was too sketchy and not presented in a readily interpretable form. From the available data, Table 70, it seems that none of the seven objectives were met.

V O C A T I O N A L

A W A R E N E S S

S T E W A R T I N D I A N H I G H S C H O O L

Vocational Awareness for Education & Work

I. Vital Statistics

A. School Name and Address:

Stewart Indian High School
Nevada Agency
Stewart, Nevada 89437

B. Component Cost:

C. Staffing Pattern:

Professional
- 1 Voc. Counselor (Title I)
- 3 PPS Counselors (1740) (Intermittent)
- 2 English Teachers (1740) (Intermittent)
- 1 Human Relations Teacher (Intermittent) (1740)
- 1 Occupational Training Instructor (Intermittent) (1740)

Paraprofessional
- 1 Assistant (Title I)

D. Number of Student Participants: 50

E. Contact Person: William C. Whipple

F. Operational Period: October to May

G. Years in Operation: Two

II. Component Objectives

Fifty (50) students, grades 11 and 12, will demonstrate their vocational awareness based upon their performance on the Vocational Guidance Inventory.

III. Evaluation

Pre-Mid-Post Vocational Guidance Inventory

Pre-Mid-Post VGI- Control Group

IV. Procedures

The fifty target group students were involved in a highly specialized, intensive program designed around direct contact with: job situations, occupationally knowledgable people, Indian speakers, vocational counseling sessions and role playing situations designed to teach basic job procurement procedures.

Table 71

Vocational Guidance Inventory

Test Periods	GROUP AND GRADE LEVEL							
	CONTROL				TITLE I			
	11th		12th		11th		12th	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/18/71)	23	38.4	23	40.3	23	38.0	23	36.9
Post-Test (May 1972)	19	39.6	18	41.2	19	39.7	18	43.2
Amount of Gain or Loss (+ or -)		+ 1.2		+ .9		+ 1.7		+ 6.3

N* = Number of Students Tested

V. Discussion

The pre-post Vocational Guidance Inventory for 11th and 12th grade target and control group pupils at Stewart Indian High School are presented in Table 71. An examination of Table 71 shows that in the 11th grade the expected increase in vocational awareness without any special program is 1.2 points on the inventory. The target pupils exceeded this amount by .5 points. The expected growth for 12th grade pupils was .9 points and the target pupils exceeded this by 5.4 points. It should be noted, however, that four 11th grade pupils who received

the pre-test were not given the post-test. The present results might change in unknown directions if the same pupils had been pre and post tested.

S U M M A R Y

Affective Domain

There were a number of different components in the affective domain however they can be categorized into three broad areas: "increasing the self image" of the pupils, vocational guidance, and dropout prevention. A total of $315,500 was expended for projects in the affective domain. Most of this total, 61.8% or $195,067, was used in dropout prevention projects where seventeen professional and seventeen paraprofessional staff members served 590 pupils. The second largest expenditure was in the area of increasing self image ($90,827) where twelve professionals and six paraprofessionals worked with 289 pupils. The smallest expenditure was in vocational guidance ($29,606) where one professional and one paraprofessional worked with 170 pupils.

The results presented in the affective domain show that the dropout prevention program was not as successful this year as it was last year. For example, at Sherman Indian High School the dropout rate increased 2.9% (from 17.4% to 20.3%) over FY 1970-71. The projects in the self image area are not comparable since each project used a different scoring system for the FAATE test. However, the results do show positive increases in attitudes toward self and this means the projects were successful. In the vocational guidance area data was presented which showed pupils became more vocationally aware.

PSYCHOMOTOR DOMAIN COMPONENTS

C H A P T E R V I

The psychomotor domain refers to the general area of neuromuscular development. This would include health, hygiene, and physical fitness.

Tables 72, 73, and 74, shows there were two professional and seven paraprofessional Title I staff working with 670 pupils in six schools and the total amount of money expended was $90,405.

Table 72

Amounts Funded in FY 1972 Title I Psychomotor Domain Components by Agency or School

Agency or School	Psychomotor Domain Components	
	Physical Fitness	Totals
Elementary Schools	$	$
Cibecue Day School		
Theodore Roosevelt Boarding		
John F. Kennedy Day School		
Hopi Day School	8,296	8,296
Hotevilla Day School		
Keams Canyon Boarding/Day	28,627	28,627
Moencopi Day School		
Polacca Day School	3,472	3,472
Second Mesa Day School	5,555	5,555
Papago Agency Schools		
Pima Agency Schools		
Salt River Day School	21,907	21,907
Supai Day School		
High Schools		
Phoenix Indian High		
Sherman Indian High	22,548	22,548
Stewart Indian High		
TOTALS	90,405	90,405

Table 73

Numbers of Students Participating in FY 1972 Title I Psychomotor Domain Components by Agency of School

Agency/School	Psychomotor Domain Components	
	Physical Fitness	Totals
Elementary Schools		
Cibecue Day School		
Theodore Roosevelt Boarding		
John F. Kennedy Day School		
Hopi Day School	61	61
Hotevilla Day School		
Keams Canyon Boarding/Day	159	159
Moencopi Day School		
Polacca Day School	164	164
Second Mesa Day School	89	89
Papago Agency Schools		
Pima Agency Schools		
Salt River Day School	107	107
Supai Day School		
High Schools		
Phoenix Indian High		
Sherman Indian High	90	90
Stewart Indian High		
TOTALS	670	670

Table 74

Number of Professional and Paraprofesssional Staff Positions Funded by FY 1972 Title I Psychomotor Domain Components by Agency or School

Agency/School	Psychomotor Domain Components				
	Phys. Fitness		Totals		
	P	Pp	P	Pp	All
Elementary Schools					
Cibecue Day School					
Theodore Roosevelt Brdg					
John F. Kennedy Day					
Hopi Day School					
Hotevilla Day School					
Keams Canyon Brdg/Day	1	2	1	2	3
Moencopi Day School					
Polacca Day School		1		1	1
Second Mesa Day School		1		1	1
Papago Agency Schools					
Pima Agency Schools					
Salt River Day School	1	2	1	2	3
Supai Day School					
High Schools					
Phoenix Indian High					
Sherman Indian High		1		1	1
Stewart Indian High					
TOTALS	2	7	2	7	9

P = Professional

Pp = Paraprofessional

Table 75

Number of Regular Program Employees Working in FY 1972
Title I Psychomotor Domain Components by
Agency or School

Agency/School	Psychomotor Domain Components				
	Phys. Fitness		Totals		
	P	Pp	P	Pp	All
Elementary Schools					
Cibecue Day School					
Theodore Roosevelt Brdg					
John F. Kennedy Day					
Hopi Day School	2	1	2	1	3
Hotevilla Day School					
Keams Canyon Brdg/Day	1		1		1
Moencopi Day School					
Polacca Day School					
Second Mesa Day School					
Papago Agency Schools					
Pima Agency Schools					
Salt River Day School					
Supai Day School					
High Schools					
Phoenix Indian High					
Sherman Indian High	2		2		2
Stewart Indian High					
TOTALS	5	1	5	1	6

P = Professional

Pp = Paraprofessional

K E A M S C A N Y O N B O A R D I N G S C H O O L

Intensive Physical Development and Recreational Program

I. Vital Statistics

A. Name of School and Address:	Keams Canyon Boarding School Hopi Agency Keams Canyon, Arizona 86034
B. Component Cost:	$28,627.00
C. Staffing Pattern:	Professional - One Physical Education Instructor (Title I) Paraprofessional - Two Recreation Aides (Title I)
D. Number of Student Participants:	159
E. Contact Person:	Mrs. Grace Christiansen, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

To raise the scores of 159 students, grades B-8, to the 50th percentile or higher as measured by the Glover Youth Fitness Test.

III. Evaluation

Pre-Mid-Post Glover Youth Fitness Test

Pre-Mid-Post President's Test on Physical Fitness

IV. Procedures

Each target student in grades B-3 received ½ hour experience daily in planned activity suited to his age/grade level and programmed to correct his deficiencies.

Each target student in grades 4-8 was involved in suitable activities for 55 minutes per day. These activities included tumbling, rhythmic exercises, etc.

After-school and evening activities were utilized to further reinforce skills. These activities ranged from team sports to an intermural, precision and demonstration.

Individual tutoring and instruction was made available on the basis of need.

Glover Youth Fitness Test

A. Two six year old boys and one seven year old girl were dropped from the target group after the mid test because their coordination had improved to the degree that they no longer required the individual attention given in the target group.

B. During the mid-test one eight year old girl had a broken arm and could not take the mid-test. Because of her arm she was unable to put the amount of effort required for the post-test in those activities that measured upper arm and shoulder strength.

C. The high percentile gain evidenced in children in 6-9 age groups may have been because exercises were fun for them to do. The children often times practiced their exercises at night in the dormitory or in their homes. The evening activities (play/games) encouraged this.

D. At these ages most of the children were developing their fine muscle coordination as well as large muscle groups and respond to routine as developmental.

President's Physical Fitness Test

A. One twelve year old girl moved before the mid-tests were given. This accounts for the decrease in the number in the group as shown on the evaluation chart.

B. The percentile gain was not as great as it was in the younger children in the target group: "Normal" developmental rate of growth and adaptability may have been a deterant. Extra-curricular activities intruded somewhat on the routine of the older children. They are not as self-motivating toward routine as the younger group.

C. Some of the children may have purposely tried to score lower on the post-test because they assumed this was the test that would determine if they were to be in the target group next year, and it developed as a "status" thing to a "target" member. Many of the children who were not in the target group made comments to the effect that they were going to try and make low scores on the pre-test next year so they could be in the target group.

California Achievement Tests

The lower scores achieved by the eighth grade children may have been due to the timing of the tests. The children were planning and earning money for a trip to Disneyland. Excitement was high and concentration extremely eratic.

Lack of improvement in California Achievement Test score at the third grade level is inexplicable.

Table 76

California Achievement Test - Total Battery, Keams Canyon Brdg Schl

Test Periods	GRADE LEVEL															
	1		2		3		4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
		Grade Placements														
Pre-Test (October 5, 1971)							20	4.2	14	3.6	11	5.7	21	5.9	16	7.2
Mid-Test (January 7, 1972)	14	1.0	20	2.9	15	3.5	18	5.0	15	4.3	11	6.3	24	6.3	14	7.5
Post-Test (April 5, 1972)	14	2.0	20	3.2	15	3.5	19	5.3	15	5.3	11	6.4	24	7.0	14	7.0
Amount of Gain or Loss (+ -)		+1.0		+ .3		0		+1.0		+1.5		+ .7		+1.1		- .2

N* = Number of Students Tested

Table 77

Glover Youth Fitness Test
Keams Canyon Brdg School

Test Periods	GIRLS								BOYS							
	AGE LEVEL															
	6		7		8		9		6		7		8		9	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (August 28 & 29, 1971)	5	15	18	10	12	8	13	8	8	18	1	10	5	13	6	12
Mid-Test (December 15 & 16, 1971)	5	34	18	41	11	34	13	29	8	44	1	51	5	59	6	49
Post-Test (May 1 & 2, 1972	5	53	17	50	12	55	13	48	6	73	1	75	5	55	5	55
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		+38		+40		+47		+40		+55		+65		+42		+ 43

Average mean increases 35.4 (all age/grade groups)

6-9 year olds 66.25% (gain over objective by 16.2 percentile)

N* = Number of Students Tested

Table 78

President's Test on Physical Fitness
Keams Canyon Boarding School

Test Periods	GIRLS										BOYS									
	AGE LEVEL																			
	10		11		12		13		14		10		11		12		13		14	
	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M
Pre-Test (August 28 & 30, 1971)	3	23	10	21	8	19	13	19	5	18	12	19	4	19	12	15	7	15	7	19
Post-Test (May 1 & 2, 1972)	3	23	10	43	7	49	13	43	5	49	12	30	4	30	12	35	7	30	7	31
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		0		+22		+30		+24		+31		+11		+21		+20		+15		+12

N* = Number of Students Tested

M = Mean

Mean score 41. percentile all children 10-14
Average gain 22%

V. Discussion

The pre-post Glover Physical Fitness Test results for 6-14 year old girls and boys at Keams Canyon Boarding School are summarized in Tables 77-78. An examination of Tables 77-78 shows that the 50th percentile objective was met or surpassed for girls and boys age 6, 7, and 8. In addition, 9 year old boys were able to surpass the 50th percentile national average by five points. All other age levels, except 10 year old girls, increased their physical fitness percentile ranking by from 12 to 40 points.

S A L T R I V E R D A Y S C H O O L

Individualized Physical Fitness Program

I. Vital Statistics

A. School Name and Address:	Salt River Day School Route 1, Box 117 Scottsdale, Az 85256
B. Component Cost:	$21,907.00
C. Staffing Pattern:	Professional - One Physical Education Teacher (Title I) Paraprofessional - Two Physical Education Aides (Title I)
D. Number of Student Participants:	107
E. Contact Person:	Principal
F. Operational Period:	January to May
G. Years in Operation:	Five months

II. Component Objectives

One hundred seven (107) students in grades 1-6 will raise their physical fitness score to the 50th percentile or higher as measured by the Glover Youth and A.A.H.P.E.R. Fitness Test.

III. Evaluation

Pre-Post Glover Youth Fitness Test

Pre-Post A.A.H.P.E.R. Fitness Test

IV. Procedures

Students were involved in an individualized physical fitness program one period daily. The program provided activities to remediate deficiencies in basic skill development such as: speed, endurance,

coordination, lateral movement, etc. The Universal Gladiator was used to reinforce other activities.

Table 79

Glover Youth Fitness Test
Ages 6 thru 9

Test Periods	GRADE LEVEL							
	1		2		3		4	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (1-19-72)	23	24	19	34	18	19	13	15
Post-Test (5-8-72)	22	69	19	74	18	61	13	49
Amount of Gain or Loss (+ -)	+4	+45		+40		+42		+34

N* = Number of Students

** = Results in "Mean" colum figured on percentile. Average norm 50th percentile.

Table 80

A.A.H.P.E.R. Fitness Test
Ages 10 through 12

Test Periods	GRADE LEVEL							
	4		5		6			
	N*	Mean	N*	Mean	N*	Mean		
Pre-Test (1-19-72)	7	17	24	16	22	23		
Post-Test (5-8-72)	7	42	24	38	22	48		
Amount of Gain or Loss (+ -)		+25		+22		+25		

N* = Number of Students

** = Results in "Mean" column figured on percentile. Average norm 50th percentile.

V. Discussion

The pre-post Glover Physical Fitness Test for pupils, ages 6 to 9, at Salt River Day School are summarized in Table 79. An examination of the pre-test scores presented in Table 79 shows that the pupils in each age group were far below the national average percentile ranking of the 50th percentile. After less than four months pupils age 9 were 19 percentile points above the national norm, pupils age 10 were 24 points above the national norm, pupils age 11 were 11 points above the national norm, and pupils age 12 were only one percentile point below the national norm.

The pre-post American Association of Health, Physical Education and Education (A.A.H.P.E.R.) physical Fitness test results for pupils age 10 to 12 are summarized in Table 80. The reported results show that age 10 pupils increased their physical fitness scores 25 percentile points, age 11 pupils increased theirs 22 points, and age 12 pupils increased theirs by 25 percentile points. However, these increases were not sufficiently large enough to bring the pupils up to the 50th percentile national norm.

P O L A C C A D A Y S C H O O L

Physical Fitness

I. Vital Statistics

A. Name and Address of School:	Polacca Day School Hopi Agency Polacca, Arizona 85040
B. Component Cost:	$3,472.00
C. Staffing Pattern:	Professional - None Paraprofessional - One Physical Fitness Aide (Title I)
D. Number of Student Participants:	164
E. Contact Person:	Fritz Poocha, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

One hundred sixty-four (164) students, grades 1 to 6, will raise their scores to the 50th percentile or higher as measured by the Glover Youth Fitness Test.

III. Evaluation

Pre-Mid-Post Glover Youth Fitness Test

IV. Procedures

Students received one hour of instruction daily from a physical fitness aide. Twenty-eight students comprised each class. The aide directed the following activities: gymnastics, isometric and isotonic strength building, team sports, track and field, and eye-hand coordination drills. Completion of a timed obstacle course run completed each activity.

Table 81

Glover Physical Fitness Test
Polacca Day School

G I R L S

Test Periods	Age 6		Age 7		Age 8		Age 9		Age 10		Age 11		Age 12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	15	23	19	33	9	22	15	21	10	26	13	29	4	31
Post-Test	12	47	19	46	9	44	15	33	10	24	13	29	4	30
Amt of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+ 24		+ 13		+ 22		+ 12		- 02		--		- 01

B O Y S

Test Periods	Age 6		Age 7		Age 8		Age 9		Age 10		Age 11		Age 12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	36	10	42	9	32	14	36	10	32	15	18	10	23
Post-Test	8	52	10	52	10	50	14	41	10	33	15	23	8	28
Amt of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+ 16		+ 10		+ 18		+ 05		+ 01		+ 05		+ 05

N* = Number of Students Tested

Mean = Mean Percentile

V. Discussion

The results of the Glover Physical Fitness Test for boys and girls age 6 - 12 attending Polacca are summarized in Table 81. These results show that girls age 6, 7, 8, and 9 increased their physical fitness percentile ranking whereas girls age 10, 11, and 12 decreased their percentile ranking using national norms. On the other hand boys in each age category increased their percentile rankings. In fact boys age 6, 7, and 8 reached or exceeded the national average of the 50th percentile in physical fitness.

H O P I D A Y S C H O O L

Physical Fitness Project

I. Vital Statistics

A. School Name and Address:	Hopi Day School Hopi Agency Oraibi, Arizona 86039
B. Component Cost:	$8,296.00
C. Staffing Pattern:	Professional - One Physical Education Coach (1740)
D. Number of Student Participants:	61
E. Contact Person:	Ray K. Wood, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

To raise the physical fitness level of the 61 target group students, grades 4-8, to the 50th percentile as measured by the President's Council on Physical Fitness.

III. Evaluation

Pre-Mid-Post President's Council on Physical Fitness

IV. Procedures

A regular program physical education teacher provided instruction to facilitate muscular development and coordination. Students participated a total of 3 hours per week. The curriculum was designed around an obstacle course and Giant Outdoor Physical Fitness unit with related activities.

Table 82

Glover Physical Fitness Items for Primary Children (9 year olds), A.A.H.P.E.R. Youth Test Manual

G I R L S

Test Periods	GRADE LEVEL															
	9		10		11		12		13		14		15		16	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)	3	16	0	-	2	12	2	14	10	21	14	17	2	19	0	-
Post-Test (May '72)	3	51	0	-	2	28	2	35	10	36	13	30	0	-	0	-
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amount of Gain or Loss (+ -)		+35		-		+16		+21		+15		+13		-		-

N* = Number of Students Tested

Mean refers to the mean of the mean percentile.

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Table 83

Glover Physical Fitness Items for
Primary Children (9 year olds)
A.A.H.P.E.R. Youth Fitness
Test Manual

B O Y S

Test Periods	GRADE LEVEL															
	9		10		11		12		13		14		15		16	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)	2	11	4	14	1	14	4	21	11	19	17	16	6	17	0	-
Post-Test (May '72)	2	64	4	22	1	38	3	50	10	43	17	40	6	34	0	-
Amount of Gain or Loss (+ -)	—	+53	—	+ 8	—	+24	—	+29	—	+24	—	+24	—	+17	—	-

N* = Number of Students Tested

Mean refers to the mean of the mean percentiles

V. Discussion

The pre-post Glover Physical Fitness Test results for age 9 to 15 girls and boys are reported in Table 82 and 83 respectively. An examination of Table 82 shows that there were increases in physical fitness for girls in all age ranges, however, only in girls age 9 was the objective of raising the average physical fitness to the 50th percentile met. In addition, the two 15 year old girls were not measured on the post-test.

An examination of Table 83 shows that boys age 9 and 12 achieved the objective of an average physical fitness score at the 50th percentile. In fact the two age 9 boys increased their average percentile from 19 to 64 which is an increase of 53 points. Although the other ages did not attain the objectives, they did substantually improve in their physical fitness.

SECOND MESA DAY SCHOOL

Physical Fitness

I. Vital Statistics

A. School Name and Address:	Second Mesa Day School Hopi Agency Second Mesa, Arizona 86043
B. Component Cost:	$5,555.00
C. Staffing Pattern:	Paraprofessional - One Physical Fitness Aide (Title I)
D. Number of Student Participants:	89
E. Contact Person:	Wellesley Hodgins, Principal
F. Operational Period:	September to May
G. Years in Operation:	One

II. Component Objectives

Eighty-nine (89) students, grades 1 to 6, will increase their scores on the President's Council Test on Physical Fitness to the 50th percentile.

III. Evaluation

Pre-Mid-Post President's Council Test on Physical Fitness

IV. Procedures

Students participated approximately 2½ hours per week in the following activities: balance beam exercises, eye-hand coordination drills, volleyball, basketball, social dancing, health and hygiene classes. These activities were supervised by a physical education aide. Classes were restricted groups no larger than 8.

Table 84

Glover and A.A.H.P.E.R. Test, Boys, Second Mesa Day School

Test Periods	AGE GROUP									
	9		10		11		12		13	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	11	7.0	17	18.5	14	13.6	8	12.3	1	10.0
Post-Test	5	21.8	6	30.0	8	21.5	8	24.3	4	26.9
Amount of Gain or Loss (+ or -)		+14.8		+11.5		+ 7.9		+12.0		+16.9

N* = Number of Students Tested

Mean = Mean Percentile

Table 85

Glover and A.A.H.P.E.R. Test, Girls, Second Mesa Day School

Test Periods	AGE GROUP							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	8.6	15	17.3	16	22.6	11	28.0
Post-Test	4	28.0	16	30.2	8	25.1	12	40.9
Amount of Gain or Loss (+ or -)		+19.4		+12.9		+ 2.5		+12.9

N* = Number of Students Tested

V. Discussion

The pre-post Glover and A.A.H.P.E.R. Physical Education Test results for Second Mesa Day School are summarized in Table 85 (Girls) and Table 84 (Boys). An examination of Table 85 shows gains in physical fitness for girls ranging from +2.5% (11 year olds) to +19.4% (9 year olds). Twelve year old girls came closest to the national average of the 50th percentile with an average ranking of the 40.9 percentile on the post-test.

The results for boys (Table 84) show gains in physical fitness ranging from +7.9% (11 year olds) to +16.9% (13 year olds). Ten year old boys came closest to the national average with a post-test average at the 30th percentile.

SHERMAN INDIAN HIGH SCHOOL

Adapted Physical Education, Physical Fitness

I. Vital Statistics

A. Name and Address:	Sherman Indian High School 9010 Magnolia Avenue Riverside, California 92503
B. Component Cost:	$22,548.00
C. Staffing Pattern:	Professional 1 Physical Education Teacher (1740) Paraprofessional 1 Teacher Aide (Title I)
D. Number of Student Participants:	90
E. Contact Person:	Mike Ragsdale
F. Operational Period:	
G. Years in Operation:	One

II. Component Objectives

To increase the physical fitness scores of 90 students in grades 9 - 12 to the 50th percentile or higher as measured by the AAHPER Physical Fitness Test.

III. Evaluation

Pre-Mid-Post AAHPER Physical Fitness Test.

Pre-Mid-Post California Achievement Test.

IV. Procedures

Activity I

Through the analysis of performance scores, individual programs of progressive muscular resistance exercises both isometric and

isotonic were developed and assigned to students to correct specific weaknesses of muscular groups and cardiovascular efficiency. The DeLorme method of progressive resistance using repitition, time, and/or weight was utilized to enable students to increase their level of fitness commensurate to their needs.

Activity II

A modified gymnastics program for 90 deficient students was conducted in order to improve physical skills and increase organic efficiency.

Results:

Due to a number of extenuating circumstances, this component was late in starting and consequently no data is reported.

SUMMARY

Psychomotor Domain

Activities in the psychomotor domain were primarily designed to increase the neuromuscular skills and coordination of pupils. There were seven professional and 8 paraprofessional Title I staff serving 670 pupils in six schools. The total amount of money expended in the psychomotor domain was $90,405.

An examination of the data relating to psychomotor domain projects shows there were increases in physical fitness in pupils in every project in almost every age range. There were a few isolated instances (girls age 10, 11, and 12 attending Polacca) where no increases or even decreases in physical fitness were found. However the overall effect was an increase in physical fitness in every school.

C H A P T E R VII

Introduction

This chapter contains very brief summaries, conclusions, and recommendations of the cognitive, affective, and psychomotor components for FY 1971-72. The reader should keep in mind that these summaries are an attempt to give the reader a very short and concise overview of the projects. For more in-depth information concerning the merits of the projects, it is recommended that the reader go to the individual chapters in each of the areas.

S U M M A R Y

Cognitive Domain Components (1)

Components in the cognitive domain had as their objectives improved reading and communication skills, improved mathematics skills, improved science, and special education opportunities. Procedures selected for reaching stated goals varied greatly and included such things as special purpose instrumentation, individualized techniques, and specialized personnel.

A total of $812,737 was expended for components in the cognitive domain. By far the largest concentration of funds ($750,720) was in reading components followed by science components ($32,655), math components ($19,038), and special education ($10,324).

In reading there were 34 professional and 50 paraprofessional staff serving 1718 students. Special education had one professional serving 60 students, math and science both had one professional and one paraprofessional Title I staff serving 60 students.

C O N C L U S I O N S

Cognitive Domain Components

An examination of the data pertaining to the various cognitive domain components shows that there were increases in reading, language, and total academic achievement in almost every component. On the other hand, whereas one school had increases in achievement that were higher than the increases reported in another school at one grade level, the trend was often reversed in the next grade level. In addition there were no clear distinctions in pupil performance among the three types of reading components. All one can really say is there were some unknown factors producing changes in pupil performance in one grade level and inhibiting such changes at the next grade level.

Recommendations:

1. In previous years the trend has been that beginning in grade 3 pupils begin losing in achievement rather than gaining, and this trend becomes more accelerated throughout the pupils remaining academic years. The data presented in this report shows that this trend has been reversed in some grade levels and thus these programs should be continued. In addition, further evaluation

should be done to determine reasons why some components were unable to reverse the trend. This evaluation should be an ongoing analyses and appraisal that will let the teachers know immediately whether or not the techniques are working and if the pupils are achieving stated objectives. If the techniques are not working then the teachers can revise the program rather than wait until the following year to make necessary changes.

2. Data collection efforts should become more sophisticated and include more varied data. For example, data pertaining to teachers and the individual students that includes such things as absentee rate, teaching experience, etc. should be analyzed as it relates to success in the academic program.

3. In addition, it is recommended that data be gathered from regular program pupils so that comparative studies of Title I and regular program pupils can be made.

4. Finally, data from non-instructional activities such as counseling should be analyzed to determine their effect on the academic programs. Data is currently being gathered, however the procedures are not systematic and an analysis is not possible from data gathered in an unsystematic manner.

AFFECTIVE DOMAIN COMPONENTS

S U M M A R Y

There were a number of different components in the affective domain, however, they can be categorized into three broad areas - vocational guidance, self image of the pupils, and dropout prevention. A total of $315,500 was expended for components in the affective domain. Most of this total, 61.8% or $195,067, was used in dropout prevention projects where 17 professional and 17 paraprofessional staff members served 590 pupils. The second largest expenditure was in the area of increasing self image ($90,827) where 12 professionals and 6 paraprofessionals worked with 289 pupils. The smallest expenditure was in vocational guidance ($29,606) where one professional and one paraprofessional worked with 170 pupils.

C O N C L U S I O N S

The results presented in the affective domain show that all components were not completely successful. For example, in the dropout prevention program at Sherman Indian High School the dropout rate increased 2.9% (from 17.4% to 20.3%) in FY 1971-72. The projects in the "self-image" area are not comparable since each component used a different scoring system for the FAATE. Even so, the results for each component

were mixed which means that pupils had more positive attitudes towards themselves, school, etc. in some schools and more negative attitudes in others.

Recommendations

There will be no Title I funded affective domain components in FY 1972-73. However it is hoped that each school will take into account the motivations, interests, and personalities of their pupils and that some measures of these important variables will be taken. Because Title I guidelines will not allow continuation of affective domain components, other sources of funds should be sought.

PSYCHOMOTOR DOMAIN

S U M M A R Y

Activities in the psychomotor domain were primarily designed to increase the neuromuscular skills and coordination of pupils. There were seven professional and eight paraprofessional staff serving 670 pupils in six schools. The total amount of money expended in the psychomotor domain was $90,405.

C O N C L U S I O N S

An examination of the data relating to psychomotor domain projects shows that there were increases in the physical fitness of pupils in every project and in almost every grade level. There were a few isolated instances (girls age 10, 11, and 12 attending Polacca) where no increases were found - in fact decreases in physical fitness were found in some of these instances. However the overall effect was positive and there were significant increases in physical fitness at every school. A number of pupils had average post-test physical fitness scores that exceeded the national average for their age range. Thus these results are promising.

Recommendations

1. The present results show that even in the successful programs, most pupils were still below the national average in physical fitness. Thus, these programs should be continued and improved where possible to further accelerate the pupils physical fitness growth.
2. Further investigation should be incorporated to determine why certain components were more successful than others.
3. Each LEA (Local Education Agency) must give serious consideration to the priorities of students over-all needs in order to determine whether or not to use Title I funds for psychomotor programs.

Directions for Changes for FY 1973

C H A P T E R V I I I

The three tables in this chapter indicate the changing trend of Title I operations in the Phoenix Area relative to (1) funding by component domain, (2) children participating by type of component, and (3) Title I salaried staff by type of component.

The most notable change reflected in all three tables is the evident decrease and eventual elimination of all affective domain components.

All three tables also reflect a significant increase in funding, staff, and student participation in cognitive domain projects. It is interesting to note that while funding for cognitive domain projects has increased by $728,320 since FY 1971 and staff positions have increased by 27 during the same period, the number of students involved in these projects has increased by only 465. This seemingly disproportionate increase in funding and staff has been necessary in order to insure effective concentration of services for the most seriously deficient students.

In the psychomotor domain the number of students has increased from 433 to 470, whereas the total funds expended has decreased from $90,405 to $54,902. The decrease in funding is due to regular program involvement and the initial expense incurred during establishment of pilot projects.

The changes reflected in these three tables are indicative of a general trend in the Phoenix Area to provide services most necessary for remediation of student academic deficiencies.

Table 86

Comparison of Amounts Funded in Components
By Title I Funding Year*

Title I Funding Year	AMOUNTS FUNDED BY COMPONENTS					TOTALS
	Cognitive	Affective	Psychomotor	OTHER		
				Administration Coordination**	Contribution To Hopi Follow Thru	
1971	368,279	644,221	11,547	262,043	137,237	1,424,327
1972	812,737	315,500	90,405	141,728	46,839	1,407,209
1973	1,096,599	0	54,902	235,019	42,570	1,429,090

* Funding Years 1971 and 1972 amounts represent actual expenditures, whereas funding year 1973 amounts represent allocation as of July 1, 1972.

** Includes Area Office Administration Project.

Table 87

Comparison of Numbers of Students Participating
in Title I Components by Funding Year

Title I Funding Year	Number of Students Participating by Components		
	Cognitive	Affective	Psychomotor
1971	2,177	2,059	133
1972	2,522	1,206	433
1973	2,642	0	470

Table 88

Comparison of Number of Professional and Paraprofessional Staff Positions Funded by Title I in Components by Title I Funding Year

Title I Funding Year	Number of Staff Positions Funded by Title I by Component								
	COGNITIVE		AFFECTIVE		PSYCHOMOTOR		T O T A L S		
	P*	PP*	P	PP	P	PP	P	PP	All
1971	11	66	19	38	0	2	30	106	136
1972	20	63	9	11	1	3	30	77	107
1973	33	71	0	0	3	4	36	75	111

* Professional

** Paraprofessional

APPENDIX A

A Discription of Materials

Used in Reading/Language Art Components

DISTAR READING PROGRAM:

The Distar Reading Program is a highly structured intensive curriculum of instruction in reading skills. It helps students gain systematic words decoding skills, while at the same time developing comprehension skills. The teacher's kit supplies detailed instructions for class drill and oral activities as well as useful charts and other visual materials. The students' "take homes" and wordbooks, provide appropriate individual activities, requiring silent reading and written responses. A class library of storybooks offers the children enjoyable reading experiences at their reading level.

LEARNING 100:

Learning 100 is an integrated total system of reading instruction. It does not supplement basal or traditional system which have failed so many of the Indian students already. Rather, it offers the students all modes needed for success in reading.

Non-readers are offered a thorough readiness program emphasizing following directions, word configuration, phonetic analysis, spatial relationships and listening comprehension. Special emphasis is devoted to developing oral communication skills.

The system is self-pacing and individualized because no student moves into the reading cycles until he is ready to read. Also each student progresses to a high level of abilities only after he becomes proficient in the lower level of that ability.

The laboratory contains various learning centers such as: controlled

reading visual training, and listening. Students move freely as they pace themselves through the cycles of learning. Cycles of learning and instruction contain constant reinforcement and check points for the teacher's evaluation of student progress.

LISTEN, LOOK AND LEARN:

Listen, Look and Learn is a system of oral language development and beginning reading instruction which combines development of all communication skills from readiness through primary language mastery.

It makes possible more thorough teaching and learning through:

(1) introduction of concepts and skills in careful sequence, from simple to complex, to insure successful performance;

(2) immediate reinforcement of initial learning of concepts and skills coupled with distributed practice to insure retention;

(3) repeated exposures to the same concept or skill from many perspectives and in a variety of instructional contexts;

(4) adaptation to each child's individual rate of progress. A given child might require less than three (3) to more than six (6) years to complete all cycles successfully depending on his ability, prior achievement, past experiences and motivation.

This system unites many of the new forms of audio-visual instruction with a variety of unique published materials. Careful control over perceptual development is insured through the use of instrument techniques.

Word attack and comprehension skills are developed through auto-instructional and teacher directed activities. Individualized reading in a multi-level high interest classroom library and extensive use of filmstrips and recordings offer enrichment opportunities. Continuous feedback and appraisal provide a guide for re-teaching, re-application and extension of skills and concepts.

LISTEN, LOOK AND LEARN:

Listen, Look and Learn is composed of twenty (20) Readiness stages and one hundred (100) pre-reading and instructional cycles. These systematic cycles of instruction include equipment, materials and procedures carefully designed to introduce and reinforce the skills, content and attitudes central to successful reading. Vocabulary, concepts and skills are introduced through Aud-X, an instrument that uses filmstrips and records in sight-sound synchronized motivation and instruction. The Tach-X which flashes visual materials at high speed reinforces vocabulary development and reduces recognition time until each word learned becomes identifiable at sight with minimal clues. Processing training provides for rapid association of words in context. The Controlled Reader develops visual efficiency, good left-to-right directional attack and fluency in silent reading.

READING 200:

Reading 200 is multi-media and multi-modal. A systems approach to communication skill development for fourth-, fifth-, and sixth-grade students.

It is largely self-instructional. The majority of the techniques are programmed for self-instruction and self-correction, allowing each student to progress in a continuous and systematic manner.

READING 200 includes:

Tach-X Accuracy Training--A nonverbal tachistoscopic program designed to heighten skills of visual discrimination, orderliness in seeing, and visual memory.

Controlled Reader Motility Training--A visual training program to build ocular motility, visual coordination, and directional attack.

Tach-X/Looking at Words and Looking at Words in Sentences--A vocabulary development and consolidation program stressing usage and context, word changing, and function with correlated tachistoscopic training to develop instant sight recognition and visual memory.

Aud-X Word Attack Review--Aud-X DEFA provides a review of phonics.

Listen and Think--A self-instructional listening program that develops listening skills.

Listen and Read--A listening program that develops reading skills through the frequently preferred modality of listening combined with correlated lesson book activities. (Levels 3-6) Listen and Read on levels 7-9 would be appropriate for advances 6th graders.

Study skills library--A self-instructional and individualized program designed to provide text tactics for content areas of science, social studies, and the study skills of interpretation, evaluation, organization, and performance.

Controlled Reader Fluency Training--A program designed to build the basic perceptual, interpretive, and visual-functional skills that permit thorough, efficient, and fluent reading.

Controlled Reader Comprehension Power--A program that combines perceptual training with the intensive development of the comprehension skills of recall, association, interpretation, and evaluation.

Reading 200 is flexible in scheduling and format. A laboratory program can be designed to fit the instructional organization of any elementary school.

READING 300:

Reading 300 is a multi-media program--a system approach to reading improvement utilizing the following EDL techniques and materials: (1) Tach-X and Flash-X training to encourage rapid, accurate seeing and to strenghten visual memory; (2) Controlled Reading to heighten visual efficiency and to build fluency and thoroughness in reading; (3) Listening Programs to develop purposeful and flexible listening skills; (4) Word Clues to enrich and expand vocabulary; (5) Study Skills Library to improve reading in the content areas and to provide sequential and specific instruction in the vital study skills of interpretation, organization, evaluation, and reference; (6) Skimming and Scanning to develop skill in effective reading. Reading 300 is largely self-instructional. The majority of the techniques are programmed for self-instruction and self-correction, allowing each student to progress in a continuous and systematic manner.

Reading 300 is individualized. A four-phase testing program prior to the start of instruction makes it possible to determine the needs and starting level of each student. Multi-level materials makes it possible for each student to start at a level where he can achieve success.

Reading 300 is flexible. Its scheduling and format can be modified to fit the needs of most junior and senior high schools.

Reading 300 is comprehensive, providing instruction, training, or guidance in the areas which have been judged to be most critical to the development of effective and efficient readers:

1. Perceptual Accuracy
   Identification, recognition, retention
2. Visual efficiency
   Binocular coordination, ocular motility, left-or-right directional attack
3. Work Knowledge
   Word meanings and usage in context
4. Word Attack Skills
   Structural and phonetic analysis
5. Comprehension Fundementals
   Recalling, understanding, associating
6. Interpretation of Meaning
   Inferring, predicting, comparing, concluding visualizing, sensing
7. Analytical Reading and Listening
   Form, Structure, detail
8. Critical Reading and Listening
   Relevancy, accuracy, validity, significance
9. Appreciation
   Sensitivity, interest, taste
10. Reference Skills
    Location of information, use of materials

11. Selective Reading
    Skimming and scanning

12. Reading and Study Habits
    Approaches, attitudes, interests, goals

SYSTEMS 80

Systems 80 is an audio-visual educational system applicable in many areas of teaching.

The Systems 80 audio-visual unit resembles a small table television. Instructional materials present such basic subjects as phonics, spelling and vocabulary building in a simple step by step progression.

These materials are designed to help teachers accomplish four (4) vital tasks essential to a complete understanding and direction of each child's individual development:

(1) Diagnose each student's knowledge of a subject using pre and post evaluative tests,

(2) Prescribe materials suitable for each student to advance his knowledge of the subject,

(3) Teach each child that subject on an individual basis at his own learning rate,

(4) Record and analyze each student's progress.

Each lesson consists of eighty (80) color pictures with audio teaching messages. At the end of each lesson, a progress check indicates level of success. A student will not progress into additional material until

he masters the present lesson. Review lessons are presented, and by covering previously learned materials they act as an effective aid to retention.

The following Systems 80 programs are available: Learning Letter Names, Learning Letter Sounds, Reading Words in Context and Developing Spelling Skills.

This synopsis was typed by Geraldine M. Williams and LuAnn M. Kelly.